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# NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DeROSSET, M. D.,  
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## ORIGINAL COMMUNICATIONS.

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### LECTURE ON A CASE OF GASTRIC ULCER, COMPLICATED WITH CATARRHIAL PHTHISIS.

Delivered at the University of Pennsylvania, Philadelphia,

By WILLIAM PEPPER, A. M., M. D.

Professor of Clinical Medicine in the University of Pennsylvania.

Reported by JUDSON DALANDS and WM. H. MORRISON.

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GENTLEMEN :—This case is one of common occurrence, and of great interest. He is a farmer and 40 years of age. He has always been disposed to worry and take life rather hard ; has used stimulants regularly but moderately, and has also used tobacco excessively until of late. His general health has been good. He had typhoid fever while growing up, and thinks he never fully regained his strength afterwards. He has had no venereal or malarial diseases. Six years ago he began to be troubled with dyspepsia, distress of the stomach, weakness and loss of energy. For the past three years these symptoms have increased, and he also vomits frequently. The vomiting has usually occurred soon after eating.

In January, 1879, for the first time he discharged blood from the mouth ; it was in quite firm clots, and of dark color. Since then hemorrhage has occurred about once a week.

His former weight was 160 lbs. When admitted to the hospital three weeks ago, it was only 113 lbs. During the past three months there has been considerable pain in the stomach with soreness on pressure. The bowels have been for the most part constipated. For some months he has had a troublesome cough, with clear mucus expectoration, and physical exploration showed the sign of chronic catarrhal disease through the upper lobe of the right lung.

Since admission his vomiting has been checked and the distress in his stomach relieved, but the cough has persisted. The combination in this case, of symptoms of disease of the stomach and of the lung render it particularly important to determine the source of the hemorrhage.

When blood comes from the air passages, (hæmoptysis) it is usually florid, more or less mixed with bubbles of air, and raised mouthful by mouthful with cough. When, on the other hand, the blood comes from the stomach, it is raised by a distinct act of vomiting or gulping : presents no admixture of air bubbles, and owing to the action of the acid gastric juice, is usually dark in color and more or less clotted.

When the hemorrhage has been sudden and large, or the stomach free from acid, the blood vomited may be liquid and florid. There are usually symptoms, also, that direct attention to the stomach as the seat of disease. It is clear, therefore, that in the present instance, that the hemorrhages have all been from the stomach.

Each hemorrhage has been preceded by heat and burning in the stomach, and usually food has been rejected and soon afterwards the blood. The blood has nearly always been dark and clotted, and never mixed with air.

Now, if the present patient merely told you he vomited frequently, and you learned that the matters rejected are only food, there are many conditions of disease that may be present. It may be a case of mere dyspepsia ; of extreme irritability of the stomach ; of disease of the liver ; of irritation of the base of the brain : or, of latent Bright's disease, &c. But it is very different when a patient tells you that he has repeatedly vomited blood ; since the conditions in which this occur are comparatively few.

The most common are cirrhosis of the liver, cancer of the walls of the stomach, and simple ulcers of the stomach. In the present instance there is no evidence of cirrhosis of the liver. It is true, that in that disease the early symptoms are those of dyspepsia, failure of appetite, irregular action of the bowels, and occasional vomiting.

The vomiting, however, is not so frequent as here ; nor is blood vomited so frequently, but when it is, the hemorrhage is usually large. If cirrhosis has lasted as long as this man's disease has, we should find some marked change in the size of the liver (which does not here exist) and ascites would probably be present, of which there is here no trace. So too, cancer of the stomach may probably be excluded.

Careful palpation reveals no tumor, or thickening of the walls of the stomach, which can so often be recognized in malignant diseases of that organ. If the pyloric end of the stomach was thickened, which is the most common seat of cancer, the vomiting would occur a considerable time after meals, when the partially digested food tried to pass into the duodenum.

Whereas, in our patient, the vomiting has usually followed the meal quickly.

In pyloric cancer, constipation is more marked than has been here. It is true that cancer might affect a part of the stomach where it would cause no obstruction, and could not be detected by palpation. But in such cases vomiting is not usually so frequent and regular as it has been here. Hemorrhage is also less frequent in cancer, and the amount of blood is usually small, so that it may be in the stomach for some time before being vomited, and being acted upon by the gastric juice, may be formed into small dark clots, the so-called coffee ground matter. Again the duration of the disease has already been longer than might be expected in cancer, which usually runs its course in from one, two or three years.

The signs of disease of the right lung, did not point to secondary cancer of that organ.

This is only negative evidence, since even if cancer of the stomach were present, catarrhal phthisis might supervene. It may be stated pretty confidently, therefore, that the lesion here is ulceration of the stomach. The commonest form of this is the so-called simple

or perforating ulcer. These are usually round or oval from three to six lines in diameter or even larger. There may be one or several of these ulcers, and they may be seated at any part of the stomach, though most frequently on the posterior wall. They have clean cut steep edges and may extend down to the sub-mucous, the muscular or even the serous coat. Their base may present small vascular granulations. The causes of these ulcers are obscure. They appear to form chiefly in those whose health is impaired, and whose nutrition and circulation are poor. The ulcers do not seem to be due to inflammatory action, but rather to a circumscribed death and casting off of the mucous membrane.

Simple cachetic ulcers are found in the intestines, probably their appearance is preceded by thrombosis of the gastric vessels, the obliteration of the blood vessels being followed by death of a small portion of tissue.

It has been suggested that this thrombosis might result from the repeated acts of vomiting due to gastric irritation; but we now know that simple occlusion of vessels occurs in other parts in enfeebled states of circulation. The symptoms of gastric ulcer may be briefly repeated. There is pain, increased by food, especially of a stimulating kind, soreness exists over the seat of the ulceration, sometimes very circumscribed. Vomiting is of frequent recurrence. It is one of the most constant characteristic symptoms. It usually occurs soon after eating, particularly if the food has been stimulating.

Hemorrhage is a frequent symptom; it may be small in amount, coming from the vascular tissue at the base of the ulcer, or it may be large, even so much so as to cause sudden death, coming from the opening of an arteriole by ulceration. The character of the blood has already been described. There is usually constipation, but not of so severe degree as in pyloric cancer. It will readily be understood, that strength and flesh fail rapidly, and that intense anæmia results. The dangers in this disease are from exhaustion, from fatal hemorrhage, and from perforation with the production of fatal peritonitis.

Fortunately, if taken in time, the disease is very curable, if the general health has not become so impaired as to destroy all power of reaction. The first essential in treatment is a rigid diet. All



solid food except, perhaps, a little scraped meat, should be excluded. Skim milk, cream, meat juice or extracts, liquid farinaceous preparations should constitute the diet. Food should be given in small quantities at rather short intervals. If vomiting still persists, particularly if there is a tendency to hemorrhage, and if there is extreme tenderness, the patient should be kept at absolute rest in bed, and should be fed entirely by nutritious enemata. In such cases the innunction of oil may also be practical.

To favor the healing of the ulcer, the secretions of the stomach should be free from excessive acidity. For this purpose, as well as for the effect upon the mucous membrane, alkaline mineral waters such as Carlsbad, Vichy or some of our native springs may be given at proper hours. To hasten the healing of the ulcer, nitrate of silver is given, dissolved in the mucilage of accacia, combined with a little deodorized tincture of opium is the best remedy.

It may also be given in the pill form, combined with solid opium. The sub-nitrate of bismuth, small doses of the sulphate of copper, or, of the salts of iron, may in exceptional cases suit better.

If hemorrhage occur, absolute rest, entire avoidance of food by the mouth, an ice poultice to the epigastrium; pieces of ice swallowed, and the use of astringents, constitute the treatment.

Tannic acid in large doses, Monsell's solution, and acetate of lead, have been, in my experience, the best astringents in the order named. Hypodermic injections of ergotine, over the stomach, have also seemed to be of use. Opium in full doses should be given at the same time.

If general peritonitis is caused by perforation, opium may be given, but death is inevitable.

Occasionally circumscribed peritonitis results from extension of irritation without actual perforation, and this may terminate favorably under suitable treatment. One of the greatest difficulties in the successful treatment of gastric ulcer is to induce the patient to believe himself as ill as he really is, and to make him continue his restricted diet as long as it is necessary.

It is impossible now to dwell upon the catarrhal phthisis, that is, developing in the right lung. It is an instructive illustration of the way in which all influences that impair nutrition, favor the development of phthisis. Beginning, as it does, in one so broken down by previous disease, the prognosis is unfavorable.

P. S. The subsequent progress of the case may be briefly stated. Under the above plan of treatment, including inunctions, vomiting ceased quickly. Hemorrhage did not recur, and the power of talking and digesting food was restored, also some temporary gain in flesh and strength took place. The local disease in the right lung advanced, however, and the man's general health failed to such an extent despite the evident cure of the gastric ulcer, that it was thought proper, to advise him to return to his home in the country, where it may be expected that death will occur ere long.

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### HAYEM ON THE USE OF IRON AND INHALATIONS OF OXYGEN IN ANÆMIA AND CHLOROSIS.

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Dr. Hayem, in conjunction with M. Regnauld, has made a number of observations on this subject. It was found that the administration of iron, in the form of Berlin blue, had no effect in improving the state of the blood or the appetite of the patients unless inhalations of oxygen were also employed. They found that, if the inhalation of oxygen were desisted from, the patient's condition retrograded, though it had been apparently improved; while the simultaneous use of iron and oxygen produced a permanent improvement, the red corpuscles being increased both in quality and in quantity. They arrive at the following conclusions: 1. The active preparations of iron act as a blood-preparing material, contributing especially to the formation of the red corpuscles; 2. Iron does not always act alone, but in dyspeptic subjects inhalations of oxygen are also necessary, in order to completely subdue the chlorosis and anæmia — *London Medical Record*.

## SELECTED PAPERS.

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### EXAMINATION OF THE GENITALIA AFTER LABOR— TREATMENT OF LACERATED PERINEUM.

By ALBEERT H. SMITH, M. D.

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Some portion of the placenta may remain attached to the internal surface of the uterus, and, becoming putrescent, give rise to hæmorrhage, for we know that anything remaining in the uterine cavity after the expulsion of the after-birth acts as a splint to keep the uterus contracted. Should you, under such circumstances, insert your hand into the uterus, you will discover the existence of hæmorrhage in the shape of coägula, which should be first removed, and then the cavity of the womb should be thoroughly cleansed with antiseptic washes.

If you meet with a tendency to flooding after labor, and if, upon careful examination you find the uterus firm and contracted and the cervical and vaginal surfaces presenting no loss of continuity, you should suspect the presence of "placenta succenturia" and at once remove it.

*In primiparæ always make it a duty to make a thorough ocular examination of the parts after the placenta has been expelled, and in the case of a multipara do not hesitate to go through with the same process if you have the slightest reason to suspect the existence of any such lesions, for fissures of the perinæum and vagina of a very serious character may otherwise escape notice.*

In its normal state it is a very easy matter to detect the difference between a smooth and lacerated vaginal surface; but where, after labor, the vagina is puffed up and œdematous, it may be very hard to recognize the existence of a tear by the sensation which it presents to the touch. Hence, you should always have the parts illuminated by the light of a candle or by gaslight. Then, again, for the thorough detection of these rents and fissures, you ought, in every instance, to introduce the first and second fingers of the left hand into the rectum and draw it forward and pouch it out and so expose the posterior vaginal wall laterally as far as the fossa at the tuberosity of the ischium, bringing the pouched surface well out beyond the vulva. This you can easily do, and in this way

calling the eyes to the assistance of the fingers, you can at once detect the presence of any lesion, if such exist, which requires your attention. At the same time you may see to it that no hæmorrhoid or fissure of the rectum be allowed to remain unattended to. This examination must be always made in the case of a primipara.

Where a laceration of the vagina thus discovered is too slight to demand operative interference, all that is necessary will be to wash the parts out thoroughly with a strong disinfectant solution.

I remember very well my first examination of the vagina after labor, and how utterly astonished I was at the appearance of its mucous membrane. It looked more like a mass of beef's liver than anything else, and seemed as though the slightest force applied would tear it through, but, pressing my finger against it I found it firm and resisting. It really looked as if the whole bulk of tissue were making preparation to slough away. The livid appearance of the parts is produced, of course, by the immense amount of congestion present, from the steady advance of a tightly fitting head.

Indeed, this livid and congested mass is much more favorable for vital purposes than any one would imagine. Never be led into mistaking this almost habitual condition of the vaginal canal after labor for one of gangrene, for if you examine it twenty-four hours afterwards, you will find that the parts have almost entirely regained their wonted appearance, if no loss of tissue have occurred.

In making such an examination as this, the first thing that you are likely to see, if it exists, is a laceration of the perinæum. This condition should be treated promptly and effectually. In the vast majority of cases, the best results will follow if you bring the torn surfaces completely together at once, so as to keep out the lochia. You will not only save your patient from great and everlasting discomfort, but will also thus set aside the necessity of the performance of the secondary operation, which is more serious and always tedious.

You can easily etherize your patient, and you will find her very willing to undergo the operation as a part of the labor process.

It is customary to divide lacerations of the perinæum into three classes, viz: (1) lacerations simply of the integuments; (2) lacerations through the perinæal body to the sphincter ani; and (3) lacerations completely through the sphincter ani and into the

rectum. These last are fortunately very rare. As a general thing, nature seems to guard this occurrence, and the tear, if serious, takes a course round the sphincter so as to almost dissect it out. If the sphincter ani is torn and gapes, the patient is placed in the wretched position of having lost all power of holding her feces and her wind, and they escape at pleasure, rendering her the most unhappy of women.

I advise you to sew up all kinds of lacerations, for wherever you have cicatricial tissue there you have pain.

The old method of putting in the stitches was to pass the stitch through the integument on the anterior edge of the tear and bring it out on the lacerated surface, and carrying it over to the other side to bring it out there in the same manner. The effect of which was to make a pocket behind the stitch in which the lochia would collect, and so interfere with perfect union of the sides. The old method simply reunites a part of the lacerated surfaces.

In order to be prepared for such accidents, you should always, particularly in country practice, carry with you the necessary instruments for sewing up the perinæum. For this purpose you want needles. I use a long Baker-Brown needle, with an eye at the end in which the wire loop is placed when you are ready to place it in situ.

You may use this needle permanently fixed in a handle, or you may prefer needles which are not attached to a handle, but which can be used by grasping them with a needle-holder, the best form of which is a Russian clamp, which renders the grasp of the holder very powerful.

You may use this needle permanently fixed in a handle, or you may prefer needles which are not attached to a handle, but which can be used by grasping them with a needle-holder, the best form of which is a Russian clamp, which renders the grasp of the holder very powerful.

Many prefer the separate needles, because they are smaller in thickness than the ones with permanent handles, and because, if one of them should be broken, you can very easily replace it.

You should have a pair of bull-dog forceps, a tenaculum, a pair of scissors, and some good, stout silver or iron wire. Or, you may use silk thread, or reliable cat-gut.

If you guard the perinæum by support and lateral incisions when needed, lacerations will be very rare occurrences, the accident when it does happen, need not cover you so with opprobrium, that you shall be afraid to acknowledge the true state of affairs and let your patient go on from bad to worse, rather than make a confession. I say this because I know the accident may, and in fact often does, occur in the practice of the very best obstetricians.

Before performing the primary operation, you ought to see that the-torn surface has been thoroughly cleansed. Use carbolized hot water for this purpose. Be very careful, however, if you find the rent is large enough to need sewing up, that you do not use so strong a solution of the carbolic acid as to destroy the vitality of the parts. You can never get any union between two cauterized surfaces. Always employ a douche of hot water before putting in your stitches, for it stimulates the parts and so hastens the healing process.

I have seen surfaces that looked as if they were going to slough, immediately improve most markedly in appearance under the use of hot water. The stimulation of the tissues produced by hot water increases ten-fold the chances of rapid and satisfactory union.

Before you proceed to put in the stitches, be careful to place a sponge well up against the mouth of the cervix uteri, so as to prevent the blood and other discharges from getting between the stitches and so interfering with union, and take very good care to withdraw this sponge when the stitches are all in situ.

The books all tell you to make the first stitch below. I always put in the first stitch above, making that stitch draw thoroughly together the margins of sound tissue above the laceration.

In one of my cases the recto vaginal septum was so thin that the needle could not take hold of the tissue. Now, it is very easy to see that if your first stitch is passed through such thin tissue as this, it is but too likely to tear out, or to ulcerate through into the rectum. So, always pass your first stitch through the thick and healthy, tissue where you know it will hold, imbedding it completely; then pass the other stitches and imbed them all as much as possible in the tissue. I always take pains to imbed the wire all the way around in the tissues, so that when I draw the ends of wire together there is no pocket left behind the stitches. I pass my



needle in close to the upper angle of the laceration and pass it entirely round to the other side, so that it does not come out at all, except at the extremity of the suture; then I take a very long wire and pass it through the eye of the needle and draw the needle back. Having, now, one stitch in the strong and unlacerated tissues, I gain a support for the tissues below, a sort of break-water, which protects the lacerated surface from the lochial discharges; then I put in a second stitch. Sometimes the recto-vaginal septum is so thin as to render it utterly impossible to prevent the needle from coming out now and then on the surface.

You are advised by the books to tighten up the lowest stitch first. I advise you to tighten up the highest (i. e.,) the first) stitch before you touch any of the others, and I think you will understand perfectly why I say this. If you tighten up the stitches from below upwards, the blood and other discharges will constantly be flowing down over the lacerated tissues and will fill up and bulge out all the little puckerings and crevices formed when the lowest stitch is tightened, and so you will have union interfered with; whereas, if you tighten up the highest stitch first, it will protect the tissues below and no blood can fill up crevices, and then all you have to do when you come to the other stitches is to wipe off the raw surface and tighten the next lowest stitch, and so on until all the stitches are secured.

Thus you will have brought together the whole surface of the lacerated tissue, so that when the plasmic material is thrown out, there is no portion of raw surface not in contact with some other portion.

One of the advantages of the Baker-Brown needle is, that it makes a track larger than the wire, and so you withdraw it very nicely; and even when the recto-vaginal septum is very thin, there is less chance of the wire lacerating into the rectum and giving rise to a recto-vaginal fistula.

As regards the method of fastening the ends of wire together after the stitch has been tightened up, I twist them together.

If you employ silk, be sure to cover it well with wax or paraffine; but after all, there is nothing like thin wire. The best results are obtained from the finest wires.

With regard to the dressing needful after the stitches have been

properly secured, I generally use some emollient ointment, such as cosmoline.

The patient must be carefully catheterized for forty-eight hours after the operation, to prevent the urine from running over the wound. Perhaps the nurse may not know how to use the catheter. In this case, I advise you to provide yourself with one of Goodman's self-retaining catheters. This instrument I have used even when the nurse could use the catheter. It is particularly valuable when the meatus urinarius is hard to reach. The gum-tubing connecting the self-retaining catheter with the vessel under the bed, should run *over* and not *under* the thigh. If it runs under the thigh, the catheter rests on the stitches, and so by its continued pressure may do some injury; whereas, if it runs over the thigh, the end of the catheter is lifted off the stitches.

After introducing the catheter, the legs should be bandaged tightly at the knees and the patient placed in bed. The after-treatment is very simple. A vaginal douche should be used at the end of twenty-four hours and the canal washed out with carbolized (weak solution) warm water.

I generally leave the stitches in as long as I can. Patients are always nervous and want to have them taken out, but I never remove them under five days, and if they can be left in for seven days I am all the better pleased. If you take the stitches out prematurely, the parts which are beginning to unite may gap again.

In regard to the treatment of *vaginal furrows*, all that is necessary usually is to wash the vagina out with a strong solution of carbolized hot water. If the bleeding is obstinate, however, you may be obliged to put in vaginal stitches, imbedding them, if possible, at the rate of about five to the inch, to stop the hæmorrhage and cause union, thus preventing cicatricial bands.

Incisions of the labia I am in the habit of cauterizing with pure carbolic acid, so as to prevent septicæmia, for a cauterized surface cannot absorb putrescent materials. In speaking of labial incisions I refer, of course, to those made for the prevention of perinæal laceration. In only one case in my practice have I found it necessary to sew up these incisions with sutures, in which case I did not, of course, apply strong carbolic acid.

With reference to lacerations of the cervix uteri, Dr. Broomall



proposes uniting the torn lips immediately by cat-gut sutures. As there is no tension of those tissues after union, I see no reason whatever why she should not succeed perfectly with the cat-gut. The condition of lacerated cervix calls for one of the most serious operations in gynæcology, for unless it is properly treated, there is the pointing of the cervix and all the attendant constitutional disturbances first pointed out by Dr. Emmet, of New York. I see no reason why the primary operation should not succeed.

If hæmorrhoidal masses project from the anal surface after labor, be very careful to restore them at once when the rectum is widely distended, and they will give rise to no trouble. Pass them in and hold them there until they show no tendency to prolapse again. If left out, they become tense and inflamed and give rise to great agony on the part of the patient.—*Hospital Gazette*.

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## JENNER ON THE TREATMENT OF TYPHOID FEVER.\*

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One great value which this address possesses is, that Sir William Jenner has never before written a line on the treatment of typhoid fever, notwithstanding his many and valued contributions to the etiology and pathology of the disease. In the commencement of his remarks, Sir William asserts the impossibility of cutting short a case of typhoid fever by means of treatment. In treating cases it must be borne in mind, first, that the disease, in the majority of cases at least, is produced by the action of a small portion of the excreta from the bowels of a person suffering from typhoid fever; that air from a drain, or air blowing over dried feculent matter, may convey the poison to the patient, or his own fingers may carry it to his mouth, or that the vehicle for the poison may be a fluid—for example, milk or water; and that the poisonous properties of the excreta may be destroyed by boiling the fluid in which they are contained, though not by filtering the fluid; secondly, that the natural duration of a well-developed case of typhoid fever is from

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\*On the treatment of Typhoid Fever. An Address delivered before the Birmingham Medical Institute. (*Lancet*, Nov. 1879, p. 715).

twenty-eight to thirty days. By self-treatment in the earliest stages of typhoid fever, the patient is prone to do himself great mischief, either by taking violent exercise, strong stimulants, or drastic medicines, according to his fancy. Many of the worst cases have appeared to owe their gravity to exercise taken at a time when the nervous system could ill afford any strain, and hence no typhoid fever case ought to be removed to a great distance if away from home. The diet should be liquid, with farinaceous food and bread in some form, if wished; broths with vegetable juices, strained fruit juices, avoiding grapes on account of skins and seeds. Milk must be used with caution. If the curd be undigested great evils arise, and the patient is placed in jeopardy. "Do not forget that a pint of milk contains as much solid animal matter as a full-sized mutton-chop." What typhoid fever patient can digest two to four mutton chops *per diem*? A patient is weak from the fever and not from lack of food. Pure water may be given *ad libitum*. If the bowels be confined, use simple enemata. Small doses of mineral acids are grateful and perhaps beneficial. Thus, the fever is to be met by rest, quiet, fresh air, mixed liquid food and blood diluents, and by the exclusion of fresh doses of poison; the intestinal lesion, by the careful exclusion from the diet of all hard and irritating substances, and the removal from the bowels of any local irritant. Headache may be alleviated by either hot or cold application, and ceases spontaneously in about ten days. Sleeplessness, also, generally disappears in the second week; still, if it be persistent, henbane, bromide of potassium, and chloral are valuable, alone or combined. With high temperature, a tepid bath, or sponging the surface will often induce sleep. Opiates are to be avoided. No treatment can arrest or limit the specific changes in the intestinal glands; but over the diarrhœa, which usually accompanies these changes, we can, in many cases, exercise a decided influence by careful attention to diet as above directed, and avoidance of accumulation of undigested food. So long as not more than three to five actions occur in twenty-four hours, the looseness is rather advantageous. If the stools be found to consist of curdled milk the remedy is obvious; if too alkaline, dilute sulphuric acid sometimes affords marked relief; if very offensive, impalpable animal charcoal frequently acts as a charm. Sometimes constipation is present, with an extensive

ulceration of the ileum; then, small-sized enemata of thin gruel every other day, are safer than large quantities less frequently. The most important and not unfrequent cause of inaction of the bowel in typhoid fever is *deep* ulceration of one or more Peyer's patches. Large superficial ulcers favor diarrhœa; a single small *deep* ulcer will paralyze the action of the bowel, a most important point to bear in mind. This state of things, too, is frequently the cause of excessive tympanitis, between the third and fourth weeks of the fever. Of all remedies, turpentine externally is most generally used at these times; but, in no case can Sir William Jenner say he has seen a diminution of the distension which seemed to be *propter hoc*. Charcoal to relieve fœtor, pepsin to promote digestion, alcohol in fit doses to improve nerve energy and so to increase the muscular power of the bowel, are each and all valuable in turn. A long tube passed up the bowel will often be the means of discharging large quantities of flatus. In intestinal hemorrhage, if it be ever so small, the patient must be kept recumbent, and not allowed to make any effort when using the close pan. If he be unable to pass urine when recumbent, the catheter must be used. Starch enemata with ten to fifteen drops of laudanum at once, and acetate of lead with three to five drops of laudanum every two or three hours by the mouth, or gallic acid and iced water, are to be administered. It is highly requisite to keep the bowels empty, and, therefore, give essence of meat alone, and no milk. If the hæmorrhage be sudden, copious, and repeated, ergotine subcutaneously, with an ice-bag over the ileum, may be employed. The faintness due to hæmorrhage must not be removed by stimulants. Perforation is always fatal, in Sir William's experience. The value of treatment by cold baths has not carried conviction to the lecturer's mind. Both quinine and salicylate of soda, employed to reduce high temperatures, have caused disappointment. Free action of the skin is often attended with great relief, and nothing assists this action so readily as a large warm and moist flannel, covered with oiled silk, applied over the abdomen and chest, combined with the administration of warm bland fluids. When, as in the latter stages, the perspiration is profuse and exhausting, the patient must be lightly clothed and his skin wiped every few minutes, if necessary, with a warm napkin, and dry clothes placed between the wet linen and the

skin. Alcohol must be given carefully to increase nerve-force, and sponging with tepid vinegar and water is sometimes of much service. To avert death from failure of the heart's power, alcohol is the great remedy. Delirium, due to fever, is never conjoined with headache; headache in typhoid fever may be most intense, delirium most violent, but the headache ceases before the delirium begins; if conjoined, we must look for that rare complication—intracranial inflammation. Alcohol is, as a rule, the remedy for delirium, but must be used with caution; seldom need more than twelve ounces of brandy be given in twenty-four hours to meet all the demands upon alcohol, and, if there be a doubt as to quantity, it is better, in typhoid fever, to give the minimum amount the benefit rather than the maximum; the reverse holding good in typhus fever. Tremor is sometimes excessive; in such cases it is almost always a symptom of *deep* intestinal ulceration. A small *deep* slough will be accompanied with great tremor; a large extent of superficial ulceration may be unattended by symptoms. Sir William Jenner concludes his most instructive address in these words: "While admitting without reserve that heroic measures, fearlessly but judiciously employed, will save life when less potent means are useless, the physician whose experience reaches over many years will, on looking back, discover that year by year he has seen fewer cases requiring heroic remedies, and more cases in which, the unaided powers of nature alone, suffice for effecting cure; that year by year he has learned to regard with greater diffidence his own powers, and to trust with greater confidence in those of nature."—R. NEALE, M. D., in *London Medical Record*.

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## ON OBLIQUE LINEAR SCARIFICATION OF THE SKIN IN THE TREATMENT OF PORT-WINE MARK.

By BALMANNO SQUIRE, M. B., London.

Surgeon to the British Hospital for Diseases of the Skin.

The performance of (vertical) multiple linear scarification as a remedy in some diseases and malformations of the skin as first proposed by myself, has now, for some two or three years, become

commonly practised, but it has been found, both by myself and others, to be a more or less tedious process, more especially in relation to that otherwise invincible condition known as port-wine mark.

The "obliteration of port-wine mark without a scar," a problem which still demands a somewhat easier solution than has yet been found for it, and it is probable that in *oblique* scarification this end has been already arrived at.

The process of *vertical* scarification cuts off definitively all lateral supply of blood to the cavernous vascular structure of which the skin affected with port-wine mark mainly consists, but it does not cut off the abnormal supply of blood from *below*, namely, from the subcutaneous vascular net-work. Hence the frequent repetition of linear scarification which has hitherto been required, in order effectually to obliterate the port-wine mark. However, by means of oblique scarification the cure of any definite portion of a port-wine mark may be easily accomplished in only two sittings, and this fact is readily intelligible on the hypothesis that, in this way (after duly reversing the incisions in the manner to be mentioned), the supply of blood to the over vascular skin is finally cut off in *every* direction, except, indeed, by means of those limited channels which subsequently become reëstablished, and which serve eventually only for the due nutrition of the tissue operated on.

The satisfactory result which is thus obtainable is effected equally as in the case of vertical scarification without the production of any scar.

It remains only for me to describe the few details of the improved process.

At the first operation (performed after freezing the skin with the ether spray), the skin is cut by means of a scalpel rapidly into a series of minute squares, but the instrument instead of entering the skin perpendicularly, enters it obliquely, that is to say, at an angle of  $45^{\circ}$  with the surface so as to divide the skin, not into a series of vertical slices at each of the two crossed operations, but into a series of slanting flaps.

The second operation is precisely the same as the first, only that the slants are respectively the opposite of the slants practiced on the first occasion.



Bleeding is almost absolutely prevented by exercising effective pressure on the surface operated on for say about ten minutes continuously.

I am now engaged in devising the construction of an instrument with many blades for the prompt performance of this operation. It is an instrument similar in many respects to my (*vertical*) multiple linear scarifier, which, perhaps, explains itself sufficiently by its name.

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### PROFESSOR BALL ON THE DIAGNOSIS OF INSANITY.

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The following is the first lecture which we have seen reported (*Gazette des Hopitaux*, December 2) of the course now being delivered at the Asile Ste. Anne, by Professor Ball :

When you approach the bedside of an ordinary patient you are usually met with friendship and good will. You are regarded with hope as a saviour, and everyone hastens to inform you. This is not the case with regard to insanity. Not only the victim looks upon your arrival with distrust, but the self-esteem of relatives has a tendency to lead you into error and become an accomplice in the delirium of one of its members. In many cases, however, the diagnosis is easy enough. If the patient exhibit certain disordered proceedings, you pronounce him a maniac; while if he bears on his countenance the impression of stupor, and keeps himself huddled up, you regard him as the subject of melancholia. But they do not always go on in this way, and you may sometimes have to contend with true obstacles. These may especially proceed from magistrates and certain learned and well-educated persons, who may be just as apt to decide as a physician. This is an error to be regretted in all points of view, and justifies the necessity of a regular and scientific method. Four problems may present themselves:

1. Is the patient mad?
2. If he be mad, what is the form of his delirium?
3. May this not be caused by an intercurrent disease?
4. Is not his insanity simulated?

1. *Is the Patient Mad?*—Here you will understand that you can

make no use of Rostan's formula. "Where do you suffer? How long have you suffered?" To such a question the lunatic would indignantly reply that he is not ill. Thus it is necessary to commence by inquiring concerning his condition and antecedents, and in default of these to proceed to minute interrogatories, finishing by a physical examination. One of the chief difficulties is to put oneself in relation with the patient, all kinds of subterfuge being required, and the mode of procedure varying according to whether we are commissioned by authority as an expert, or directly consulted by the patient himself or his friends. The first recommendation I give you is to present yourselves with authority. The insane, although they are in revolt against reason, readily allow a real ascendancy to be imposed upon them. They retain their respect for the magistracy and armed force, and some adroit insinuations, such as that we are charged with an inquiry, etc., may suffice to obtain valuable admissions. These first difficulties overcome, we should let the subject go on talking as he chooses, merely guiding the course of his ideas and preoccupations, without opposing the flow of his verbose loquacity. Maladroit interference would suspend the course of his delirious conceptions, just as we may suspend the sub-delirium of a typhus patient when we seek to arouse him from his torpor. If in this way we can only obtain from him some vague information, we can always engage him in ordinary conversation on some common topic in order to be able to judge whether he is capable of judgment, memory, cohesion of ideas, etc. In the case of intellectual confusion we may easily find the channel of the dementia; but, if doubt still remains, we must search in another direction, and I do not know of any better manner of obtaining light in such cases than having recourse to the arithmetical test employed by Prof. Breca for the subjects of aphasia. By asking how many five times five or six times six, etc., make, we rarely fail to cast the sound with certainty into the depths of the perverted mind. After having engaged him in on apparently indifferent conversation, by successive transitions you come to inform yourself of his health, and the really weak point of the individual. A word will often decide you. I saw a locksmith some time ago, who presented all the symptoms of commencing general paralysis, but who, in regard to his faculties, seemed irreproachable. One day, however,

he told me he had been the subject of so singular a disease at the Pitié that M. Labbé had assembled 50,000 students in order to lecture upon so rare a case. An exaggeration like this at once taught me what I ought to think of his mental condition. The formulæ are easily varied, but I recommend you to especially have in view the sentiments of pride and vanity, and the social position of the patient should also be considered. Sometimes he believes himself to be highly fortunate, when he has no means of existence; or, possessed of all the elements of well-being and comfort, he may regard himself as reduced to mendicancy. Interrogatories concerning parentage or friends will often furnish most positive information. I one day asked a lunatic whether he was really the son of a grocer, when he confided to me that he was a bastard of the Pope. On following up the lunatic into his last intrenchments, he soon makes frightful confidences concerning his relatives, his enemies, and the miseries of his existence. We here approach the *délire des persécutions*, and then you have to ascertain whether hallucinations exist, whether he hears voices or threats are addressed to him, and whence they come; whether he sees his persecutors, and what forms they assume. You should inquire, also, whether he has hallucinations of smell or taste, suffers from filthy odors, has been poisoned, and whether the taste of the adulterated food which has been given him is perceived long after meals. Political events often cause an outbreak of ambitious delirium. At one time a number of persons persisted in stating that they were the sons of Louis XVI., and lunatics often declare themselves persecuted for the sake of a valuable inheritance that has descended to them. The religious question should be approached only with prudence and circumspection, and avowals will only be obtained by caution. The lunatic will then avow to you that he has long had relations with the superior powers, and that the renovation of the world has been confided to him. Secrets of this kind are sometimes kept for years, or even during an entire existence. \* \* \* \*

As to the natural habitus, it is of great importance in the diagnosis. The physiognomy resembles a mask, exhibiting no longer any intellectual reflection. The eyes wander, and have sometimes the immobility of a batrachian, while at others they roll in the orbit like those of the traitor of a melodrama. The expression is



that of cunning and trickery; the features are ill-defined, and wrinkles show prematurely. As a general rule, lunatics are more ugly than by nature; but some women, under the influence of maniacal excitement, exceptionally assume an illuminated and poetic expression, which is not without its charms. I must also mention the pigmentation of the integuments (a characteristic bistre color sometimes being present), tremor, hesitation of speech, strabismus, etc. The attitudes vary with the strength and the idea which the lunatic entertains of his position, his powers, or his infirmity; and the dangers which menace him. In the one case he walks with ostentation, taking on a royal and protective air; and in the other being humble and shrinking. The smallest details are of importance. The door-bell of a rich man with numerous servants is rung, and he answers it himself, because he is agitated and anxious to know that he has nothing to fear from the new arrival. He is already affected, and the drama will ere long be played out in all its varieties. Their gestures, ties, and mode of demeaning themselves, frequently betray lunatics. If they are searched, in the lowest depths of the clothes of some of them will be found a magazine of provisions, or objects collected or stolen by hazard, denoting an exaggeration of the instinct of property. Finally, we must take into account the history of the patient, his near or distant relationship with lunatics, and the fact of his having had prior attacks of insanity (relapses are of frequent occurrence at Sainte-Anne). We must ascertain also whether he has had neuroses, epilepsy or exophthalmic goitre, and whether he has undergone change in his tastes and tendencies, such as seeking solitude, and what have been the precursory phenomena of the crisis.

2. *What is the Form of Insanity?*—I shall not offer you a learned classification, but will content myself with telling you what is most often seen within this Asylum and beyond its walls. *a.* First of all we have general paralysis, which is becoming more and more frequent in Europe, although it is not met with in Ireland—a singular circumstance, seeing that the inhabitants of that country are active, intelligent, drinkers, and easily given to excess; which are all predisposing conditions. *b.* Alcoholism continues to make ravages which the phylloxera has not arrested. *c.* The *délire des persécutions*. *d.* The insanity which is consecutive to neuroses may be

placed in the fourth rank, and in the fifth sympathetic nerve insanity dependent on lesions of various viscera, as the uterus, liver, etc. *e.* All the other forms of insanity may be ranged under the head "various."

3. *The Temporary Influence of Various Diseases.*—Certain acute diseases, and especially typhoid fever when it is not accompanied by intestinal disturbance and its ordinary symptoms, may put on the appearance of insanity, giving rise sometimes to unfortunate confusions that are only revealed at the autopsy. It is the same with the acute meningitis (chronic meningitis is especially our own concern). Aphasia has sometimes given rise to a belief in the presence of insanity; and drunkenness, prolonged during several days, may induce divagations which persist until the consequences of the excess have passed off.

4. There is not time to speak of simulation; but it may be stated that it is scarcely ever met with except in criminals wishing to avoid their penalty.—*Medical Times and Gazette.*

## SYPHILITIC HERPES.

The patient, an inmate of the London Hospital, and under the care of Mr. Jonathan Hutchinson, was an unhealthy-looking man, a discharged soldier, aged thirty-five, with peculiar eruption running round the left side of his chest, at once recognizable as a form of herpes zoster, or "shingles." There was nothing in the position or general outline of the eruption that would distinguish it from ordinary herpes zoster, but it would have been difficult to fail to notice at the first glance that its aspect was in some way different from what is usually seen in a simple case of this disease. On inquiry it was found that the eruption had existed for no less a period than nine months. The patient stated, moreover, that it was "much better" a few months before, but that it broke out again in (what he termed) a second attack, although the side had never been entirely free from eruption, even in the interval of amelioration. On examining the eruption closely, it was seen that

in some places there were distinct and prominent scabs; the eruption here had evidently taken an ulcerative action, and approached in some little degree to the characters of rupia. The skin where the eruption had departed was of a dusky-red color, and presented here and there a faintly-depressed scar, showing that there had been a loss of tissue. It was ascertained the man had had undoubted syphilis; in fact, he had a large periosteal node on the forehead at the moment. On this account, but still more from certain peculiarities of the eruption itself, Mr. Hutchinson said he was of opinion that this was a case of syphilitic herpes, and as such a very rare affection.

"Herpes," Mr. Hutchinson went on to say, "is, as is well known, a skin disease of nerve origin. It is produced through some particular nerve influence, and, having regard, therefore, to its origin, we must consider the present case not as an example of common herpes occurring in a syphilitic patient, and so possibly somewhat modified by that disorder, but as a case where the poison of syphilis has caused such nerve changes as to bring about this eruption. The action of syphilis in this case is through the nervous system, and the eruption must be considered as an expression of some syphilitic disturbance of nerve. Thus we see syphilis as an imitator of typical skin eruptions, and, as, I have often stated, it rarely, very rarely, imitates herpes. I consider this eruption to be the syphilitic form of herpes on the following grounds: The man is syphilitic. The skin disease persists—it has persisted for nine months, with a recurrence of eruption during that time, whereas common herpes tends to spontaneous cure, as do all skin affections that have their origin in the nervous system. It is most rare, too, for common shingles to persist for so long a period as nine months. It is true, that it is sometimes very tardy in its appearance, but, I think, never to such a degree as obtains in this instance. The scar left here and there by the clearing up of the eruption is depressed, distinct and of a dusky-red color. The eruption is at places almost rupial. Finally, there is one feature in the case that makes it—as a case of syphilitic herpes—very peculiar. Syphilitic herpes is nearly always symmetrical on both sides of the body, but in the present instance the eruption appeared on one side only, the right chest being perfectly intact. The case, therefore, must be regarded as extremely unusual."—*Lancet*, Oct. 25, 1879.—*Hospital Gazette*.

## ABSTRACT OF A PAPER ON ANIMAL VACCINATION.

By DR. WARLOMONT.

Read before a Special Meeting called by the British Medical Association.

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I feel that my temerity is great in discoursing to you on vaccination in the country of its birth, under the sky which has seen the growth of that to which we owe the most stupendous benefit with which the genius of man has ever endowed mankind. Permit me, before commencing my address, to fulfil a religious duty in at once saluting the name which grateful families only pronounce with veneration—the great name of Jenner. In speaking of vaccination for the first time I wish to make a profession of faith, which will be sincere, as everything I shall have the honor to say to you. Although I have come to speak to you on the method of so-called animal vaccination, I am anxious, above all things, to tell you all my ideas as to the part which it is expedient to assign to each of the two methods. In my view animal vaccination should have no tendency to forcibly supplant vaccination from arm to arm. The latter ought, on account especially of the facilities afforded by it principally in the countries where the population is much scattered, to be scrupulously observed. They are, in fact, two sisters, and must not be separated. This proposition is based upon a fact without which it could not exist—the perfect identity between the lymph of the child and of the calf, so far as regards their active principle. The vaccine is composed of two chief elements—a vehicle which is nothing but serum, and some special granulations which represent the vaccinal power. This last fact has been quite recently placed beyond doubt by experiments made at the vaccinating establishment of Amsterdam by MM. Carsten and Coert, whose results fully confirm those which M. Chauveau had already obtained by other means with regard to human lymph. The identity is perfect as to the nature of the active principle of the lymph, whether it is derived from the calf or the child. It is in both cases a figurative granulation, perhaps a microbe, suspended in serum. This serum, however, differs a little; it is more plastic in the calf, perhaps because the lymph yielded by the latter has had to be expressed by a force which expels more fibrine; hence a tendency to

coagulation, which renders its keeping in the liquid state more difficult, or rather, its expulsion from the capillary tubes into which it has been put. This identity is established, if possible, more completely still by my own personal experience. During six months I have successively transmitted the same lymph from the calf to the child, from the child to the calf ; and, after twenty-five transmissions thus crossed, I have found the lymph still to possess all its original qualities. This fact, well established in the way I have just related, enables us to formulate the proposition that human lymph and calf lymph can render each other mutual aid and assistance. But, it will be asked, if the two lymphs are of equal value, why call to the aid of humanized lymph, the supply of which never fails, the assistance of animal lymph ? The answer is, that this help is especially necessary to satisfy doubts, fears, imputations, and perhaps prejudices. It has been said that lymph degenerates by passing through the human organism ; so that what was introduced by Jenner has now lost a part of its power. This is only a simple assertion, and its truth has not been proved. There is, perhaps, some merit in my acknowledging it, but I, myself—rashly, I fear, but honestly—brought forward this idea some years ago. At the present time nothing proves to me, nothing tells me, that lymph can degenerate. As long as its globular molecule—its microbe ?—is preserved and is healthy, there is no ground for asserting that it has degenerated. Have small-pox and syphilis lost their vigor by lapse of time ? However this may be, the feeling exists, many physicians share it, and I think it must be respected. If to their mind animal lymph promises to those vaccinated with it a more certain and more durable immunity, what right have we to refuse it to them ? Again, it has been said, and this is much more serious, that human lymph taken from a syphilitic subject can transmit syphilis to the vaccinee. The fact is only too true, and certainly it is not in England that it is necessary to strive to establish it. The physician ought, then, to guard himself against such a possibility ; and he can, indeed, only do so by imposing upon himself the obligation only to make use of the lymph from infants whom he has under his own eyes, and of the state of whose health, as well as that of their parents, he can be positively assured. We will not insist too strongly upon the necessities in this direction ; but we believe



that the practitioner can in no other way find the elements of complete security. This being so, he ought not to be allowed on his own responsibility to make use of any human lymph collected by any other person than himself; and he should impose upon himself as a line of conduct that, when a family requests him to perform vaccinations or re-vaccinations, the family itself should provide him with inoculating matter. In this way, and in this way alone, can the physician protect himself against future responsibilities and claims. I am fully aware that this method of procedure, faithfully followed, would have the result of increasing and exaggerating the mistrust already diffused in the public mind. But what is to be done? The physician is by no means anxious to offer himself as a holocaust to the ill-feeling of families, always disposed to attribute to the lymph employed all the maladies which may subsequently seize their children; and the prudent course which I recommend to them is the only one which can at once really cover their responsibility, and, on the other hand, screen them from unjust reproaches. I know full well that I shall be accused of excessive precaution. At vaccination establishments, I shall be told, the collection of lymph from the arms of infants is done under conditions calculated to offer every security; the persons charged with this office quite appreciate the importance of the duty confided to them, and not a tube of lymph escapes their hands which has been taken from a doubtful source. What a mistake is this assertion! Does not the moment always arrive when the most attentive, the most scrupulous man, relaxes his vigilance? So, when the question is of human lymph, this rule must always be vigorously observed: Do not vaccinate any subject unless you can take lymph for its vaccination from the arm of a child present whom you have yourself carefully examined. Now, this condition cannot be always observed. Too often, the stocks can only be kept up by means of preserved lymph collected from subjects intended to serve as vaccinifers. These conditions apply indiscriminately to all countries in which vaccination is voluntary; but there recourse to it can be dispensed with until opportunity serves. In those countries in which vaccination is compulsory, it is not the same; it is necessary to submit within a fixed period to the lancet of the vaccinator one's children or grand-children, without, in the majority of cases, having the

time—we are speaking especially of the poor,—the power, or the means to inquire if the matter to be used for vaccinating fulfils all the conditions for harmlessness which one has the right to demand of it. I do not hesitate to repeat—I say “repeat” because I have already said and written many times—that this is not right. In the countries where vaccination is compulsory by law, the duty of the State is to put in the hands of the public a lymph which should be free from all suspicion of diathetic adulteration. Like Cæsar’s wife, it ought always to be above suspicion. Nothing is so blind as the prejudices of the public ; but are these prejudices inconsiderate ? England, in systematically rejecting animal vaccination, as it has officially done up to the present, has neglected to rob re-vaccination of the principle obstacle which has been obstinately thrown in the path of its general acceptance ; and it has by this neglect committed a fault for which public opinion has, perhaps, the right to reproach it. However this may be, the objection founded on the difficulties of execution is no longer valid. If he who speaks to you has been able during more than ten years to preserve his service from all interruption, the pursuit of a similar object and the execution of a similar programme cannot be beyond human power. What has been done in Belgium can be done in England. But will the organization and the direction of such a service be an easy task ? Very far from the truth would he be who had such a notion. One cannot, indeed, imagine all the zeal, the care, the incessant supervision, which such an enterprise exacts, and in default of which all the wheels of the machine will stop at once.

After relating many facts, the Professor concluded by saying : Does animal vaccination preserve from small-pox as does humanized vaccination ? Up to the present, no one has contested this, and we have no taste for fighting wind-mills. I confine myself, therefore, to what I wrote five years ago on this subject :—“ Out of more than 10,000 children vaccinated at Brussels with animal lymph, from 1865 to 1870, and who went through the terrible epidemic of small pox which in 1870 and 1871 frightened the world, not a single one was, to my knowledge, reported as being attacked by the disease. The same immunity was shared by those—a much larger number—whom I had re-vaccinated, and who, at the same time, were living in epidemic centres.” Three years later, in 1878, wishing to have

a clear conscience, we, at the meeting of the Belgian Academy of Medicine on March 30, appealed with this object to our colleagues in the following terms:—"I have said before that no such case had been reported to me. I repeat it; and, up to the present, none of the numerous practitioners that I have questioned on the subject contradicted me. Have there not been any? It seems to me impossible. However, this may be, I appeal to the medical officers of hospitals and charities to clear up the point, which, on account of the deductions to be drawn from it requires to be strictly verified." This appeal has remained, and still remains, without reply. Such a silence is what I hope to evoke from you, as the most eloquent testimony in favor of the method of which I am the most confident defender. I will conclude by stating precisely what position I recommend should be assigned to animal vaccination. This position is not of that exclusive character that one might think. In the recent report which I addressed to the Minister of the Interior of Belgium, and to which I have referred above, I have thus frankly explained it. The State Vaccine Institute, while being the supporting column of vaccination in the country, ought not to have any thought or claim of substituting itself for the traditional practices. Vaccination from arm to arm, strong in its ancient rights, is, and will long yet remain, the greatest strength against small-pox, and nothing ought to be omitted to encourage and regulate it. Animal vaccination ought now only to be its faithful auxiliary, but an auxiliary so useful that it would be as unjustifiable to pass it by as to desire to upset suddenly the classical method.—*Medical Times and Gazette*.

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#### FORMULA FOR COUGH MIXTURE.

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R.

Tr. benzonî Comp.

Acidi hydrobromici, āā ̄ i.

Morphia sulphatis, gr. jss.

M.

S. Teaspoonful on sugar 3 or 4 times, daily.




## EDITORIAL.

### NORTH CAROLINA MEDICAL JOURNAL.

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### ANIMAL VACCINATION IN GREAT BRITAIN.

The recent movement in favor of animal vaccination in Great Britain looking to a modification of the present law of the supply of vaccine carries an unusual amount of interest with it, inasmuch as vaccination there is compulsory.

The London *Times* characterizes the conference on animal vaccination lately held at the house of the Medical Society of London as of grave national importance. Dr. Warlamont, of Brussels, was present on the occasion, and delivered an address which will be found upon another page.

The causes which have led to this reopening of the question of the source of vaccine supply in the country of JENNER, the birth of vaccination, are chiefly the work of the anti-vaccination societies which were formed to oppose the compulsory vaccination law put into operation in 1853. These societies have busily collected every item that could in any way be construed or distorted into the argument for their purposes. They have industriously circulated

placards and tracts, and have openly defied the law, submitting to fines rather than to have their children vaccinated. Some of these tracts are curious reading, but serve to show the animus of the leaders of the movement.

We give one as a specimen :

VACCINATION THE BLOOD-POISONER !!

TO JOHN MORRISON, ESQ.,  
BRITISH COLLEGE OF HEALTH, LONDON,  
8 Neeld Terrace, Harrow Road, W.

Dear Sir:—I enclose you a cutting from "*The Lancet*, of June 30, page 946 ; *Blood-Poisoning and Murder*. Those 'learned fools,' the doctors, as Professor Newman justly styles them, having an eye as usual to loaves and fishes, have gammoned the government to make a grant of £350 out of John Bull's purse, to aid in the discovery of the cause and nature, and the best mode of preventing the infectious diseases, pyæmia, septicæmia, purulent infection, &c. To you, Sir, as to every other man outside the walls of a lunatic asylum, who will take the trouble to think for himself, the causes of these dire evils which afflict and curse our beloved country is not far to seek. These pretended healers of the sick have themselves been for the last 76 years assiduously at work infecting the blood of the whole nation with that quintessence of disease, filth and pollution—VACCINATION."

"If this accursed practice were to be abandoned to-morrow it would require several generations to eliminate from the blood of the human race the taints of cancer, syphilis, scrofula, and consumption, which have been inseminated by vaccination, and thousands yet unborn will curse the madness and folly of their progenitors for their insane use of this invention of the Devil."

"From the great and alarming increase in the deaths of infants and young children from syphilis since the passing of the Compulsory Vaccination Act in 1853, (see foot note) may we not without irreverence conclude that vaccination is the 'Scarlet Woman' spoken of in the book of Revelations who polluteth the whole world with her abominations."

"Yours very truly,

"In the Cause of Medical Freedom,  
"WILLIAM YOUNG."

"P. S. Cause and effect. Since the passing of the Compulsory Vaccination Act in 1853, the death-rate of infants and children under five years of age, of syphilis, has doubled. In London alone, from January 1st, 1872, to May 26th, 1877, one thousand, nine hundred and fifty-two such deaths were registered."

At one of their meetings held in Keighley, one the speakers moved "That this meeting considers the Compulsory Vaccination

Laws are unreasonable and unjust, that they cruelly interfere with parental rights; that they fail in preventing the spread of small-pox, and that they decrease the vigorous health of the population. And this meeting pledges itself that until they are repealed it will do its utmost to retard, impede, defy, and bring into deserved contempt these tyrannical laws."

Notwithstanding these clamorous demonstrations the law in England has been vigorously enforced, but it is not difficult to see that the anti-vaccinationists have put in an entering wedge, and that the delay in listening to their complaints has brought upon compulsory vaccination a degree of opposition from which it will not easily recover. That the opposition of these societies was based only on a small degree of truth, mixed with grotesque error, was a reason why the authorities should have seriously made an effort at reform, instead of making a broad denial of the harmfulness of humanized vaccine. For some of the best pathologists in Europe and England had shown incontestably that there were cases of syphilis resulting from the vaccination as directed by the Local Government Board, and if a few cases could occur, it was not at all unreasonable that parents from all classes of society should look with some degree of suspicion on all vaccinations from whatever source. Furthermore, it is a singular phase of human nature which induces the animal to rise in indignant rebuke, and sometimes with ferocious opposition against any law that compels him to make provision against possible calamity.

Another of the reasons which led several English medical journals, conspicuously the *Medical Examiner*, (which sent a commission to Brussels to study animal vaccination) to seriously enquire about the adoption of animal virus, was that the Local Government Board failed during the late prevalence of small-pox in London to furnish a sufficient supply of virus to meet the demands of the occasion.

The whole matter has now been precipitated by the proposal of Dr. Cameron to introduce a Bill into Parliament, compelling the authorities to provide lymph obtained from calves, and if it becomes a law will "confer upon every parent the right to demand that this lymph should be employed for the vaccination of his children."

The *Times* in commenting on Dr. Warlomont's address, says as

regard the immunity from syphilis by the employment of animal virus :

“ Even the alleged immunity from syphilitic inoculation would not be complete ; for this, in the ordinary arm to arm procedure, can scarcely occur except as a result of gross and culpable carelessness. A vaccinator who would be careless with human lymph would be careless with any other ; and it is more than probable that blood from the arm of a syphilitic child might sometimes be conveyed to a healthy one by means of an imperfectly cleaned lancet. It is not unlikely, indeed, that it was in this way, and not through the medium of vaccine lymph, that the recorded syphilitic inoculations were actually brought about.”

“ The state of things in this country is that we have now a system of vaccination which no one assumes to be perfect, but which, nevertheless, is the most complete in the world—the most complete both as regards the number of children and the success of the operation ; and this system has been developed, during the last few years, on a basis afforded by experience of the failure or the imperfect successes of former times.

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“ The most important feature of the English system is its essentially “ arm to arm ” character, which secures the use of fresh moist lymph in the great majority of cases ; for this is the condition of a large percentage of success, large whether measured by the proportion of insertion successes or by the proportion of children in whom the operation does not fail. A child is not effectually protected by less than four good vesicles ; and a smaller number, while sufficient to prevent any further vaccination at the time, affords only a temporary and uncertain security against small-pox. If Dr. Cameron’s Bill were to pass, in the absence of any provision, either pecuniary or in the way of organization, for vaccinating relays of calves in every village in the kingdom, it would be necessary to vaccinate all the children whose parents claimed calf lymph with that which had been taken and preserved at some central depot. The inevitable result would be a large percentage of insertion failures, and of children with only one vesicle or perhaps with two ; and these children, in the course of a few years, would lapse into the ranks of the unprotected, and would afford a plentiful supply of subjects for a small-pox epidemic. The risk is far too great to be incurred, and the

advocates of animal vaccination must submit a plan matured in all its details before they can expect to obtain the support of the Legislature. There can yet be no doubt that the practice is not only unobjectionable in individual cases, but desirable and even excellent, and it is much to be wished that an establishment for the purpose could be opened in London by private enterprise."

The *Medical Times and Gazette* suggests that both systems of vaccination be allowed to go on side by side, that a true comparison may be made, and that the machinery now so successfully conducted by Dr. Seaton be not baulked. This is a wise suggestion, and its accomplishment would do more to settle the claims of animal virus than arguments.

In this country the revolution has gone on from the old to the new way, by the force of circumstances. There seemed to be no effort except on the part of a very few pioneers, and in fact the lead of one man was actually followed by the profession with a unanimity seldom witnessed. The disasters which overtook vaccinators during the progress of the late war, left them when they emerged from it, in a ripe condition for a reform of some sort. And when Dr. Henry A. Martin pointed out that it was by animal vaccination that they could restore the unbroken line of pure succession, his idea was adopted with so much confidence, that judging by the seldom recognition of his claims, the medical world has already appropriated the truth as common property.

However this may be, animal vaccination has quietly taken possession of the medical mind in this country, even our patients demanding it of us as the safe and sure way, and the day is not far distant when the English mind will be as fully possessed of its value.

The trial of the experiment of animal vaccination in England, side by side with arm to arm vaccination where there is so much official neatness and precision, will make an important chapter in the already brilliant achievements which vaccination has added to the history of preventive medicine.

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Martin and Richet say, that in a therapeutical point of view the injection of milk is a useless and dangerous operation and should be proscribed.



## REVIEWS AND BOOK NOTICES.

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ANNUAL REPORT OF THE COMMISSIONER OF AGRICULTURE. For the year 1878. Washington : Government Printing Office. 1879.

What has a medical journal to do with a volume of agriculture ? some of our readers will say ; and in answer to any such we will reply, secure the volume and read and answer the question yourself.

The doctor-farmers in North Carolina are unfortunately too numerous, but to them we must first commend the report of the botanist and chemist on grasses and forage, a very practical article, illustrated by numerous wood-cuts. The familiar grasses,—maiden cane, crab-grass, smut-grass, and Bermuda-grass, so well known in all our eastern section, together with many others not so well-known, are clearly figured, thereby enabling one not familiar with botanical description to establish the identity of a species.

But the most interesting section of the volume to our readers will be the article on the Diseases of Swine and other Animals. To those of us who have received our knowledge of diseases of animals from newspapers, this report will come as a pleasant surprise. The macroscopic and microscopic pathology of Swine Plague, known popularly as hog cholera is described by Dr. J. H. Detmers, V. S. He describes it as “a disease *sui generis* peculiar to swine, is neither cholera nor anthrax, it somewhat resembles the enteric fever, or dothineria, of man, but is not identical with the same ; is communicated from one animal to another by direct and indirect infection ; has usually a sub-acute course ; is extremely fatal, especially among young animals ; and exempts neither sex, age, nor breed, but seems to prefer, in its attacks, \* \* \* large herds, and is always most fatal in sties, pens, and yards in which many animals are crowded together.” Page 332.

The most carefully prepared part of Dr. Detmers work is under the head of *morbid changes*. “Having ascertained,” he says “that swine plague is infectious, (p. 347) and can be communicated by inoculation, and also through the digestive canal by a consumption of morbid tissues, I considered it to be of great importance to ascertain whether the infectious principle consists in something corporeal, endowed with life and power of propagation, or in some chemical agency or mysterious fluid permeating the whole organism.” “As

all microscopical examinations of the blood, morbid tissues, and morbid products of forty-two animals examined have revealed in every case the presence of numerous bacillus germs, (micrococci of Hallier) are developed *bacilli suis* (the author's name for swine-bacillus) I deemed it necessary to ascertain the relation which these extremely small microscopic bodies may have to the morbid process and to the infectious principle." The experiments made on three pigs to settle this point resulted in declaring his belief "that the *bacilli* and their germs have a causal connection with the morbid process of swine-plague." He thinks the results can hardly be considered conclusive, and that some more experiments of the same kind are needed to confirm his conclusions. Figures, illustrating the microscopic appearances of bacilli and bacillus-germs are presented in a well executed lithographic plate.

We find also interpolated in the text, well-executed, but rather pictorial litho caustic plates by A. Hoen & Co., of Baltimore. The first and second show the right lung of a pig, gorged with blood, showing minute innumerable small red spots or specks, indicating incipient embolism. Plates 5, 6, 7 and 8 show ulcerous tumors of the intestines.

Dr. James Law gives the following account of his experiments and observations. He found the disease inoculable, and found *bacilli* in the blood of the diseased animals, and in one case, the second day before death, the blood swarmed with bacteria. Dr. Law also found that virulent products which had been frozen hard for one or two days, served to inoculate animals, and produced the disease of a very violent type.

Dr. Law's article is illustrated with lithographic figures of a bacterium, of the head and tail of a *strongylus elongatus*, and there are other good figures of the same, and of *tenia marginata* and also of microscopic sections of the skin, liver and lungs.

To medical men, this work is of two-fold interest. If the observations of Dr. Detmer's in regard to the isolable causative element in swine-plague be substantiated by others, the profit to accrue from his discovery will not be limited to arresting the disease among the swine, but will serve a more important purpose in giving direction to the investigation of the diseases of man. We are not disposed yet to accord to these microscopic investigations prime importance,



until clinical studies corroborate them. The fate of Obermeyer's *spirilla* theory in relapsing fever, makes us sceptical.

We have said enough about this work to convince our readers of the very high merit we consider it possesses. The book-lover will be very impatient with the manner in which a letter-press that would be considered very shabby in a patent-medicine almanac, is interpolated by beautiful and costly illustrations. W.

# ETIOLOGIE ET PRONOSTIC DE LA GLYCOSURIE ET DU DIABETE.

Par le Docteur JULES CYR. Mèmoire récompensé par l'Académie.

Paris: V. Ad. Delahage et Cie, Libraires-Editeurs. 1879.

Pp. 172.

We do not know where the student would go for a more comprehensive digest of the existing state of our knowledge of diabetes than in the work before us.

*Part First* treats of the etiology of the disease, in physiological and pathological order. The physiological heads include heredity, temperament, constitution, age, sex, climacteric conditions, professions and employments, and alimentation.

The pathological heads include first the lesions of the nervous-system,—experimental glucosuria,—and moral influences, such as disappointment, great care, violent and sudden emotions. Lesion of the digestive and respiratory systems are then considered, and the action of medicinal agents. Lastly under the pathological causes, diathetic dyscrasias, long suppurations, large hæmorrhages, and serious sickness.

Only twenty pages, about one-eighth of the treatise is devoted to prognosis.

While Dr. Cyr has added little of original matter, in the treatment of his subject. He has brought together material with such a skillful method, that lack of originality shows only the more conspicuously how maturely he has studied his subject.

The causative influences of the excessive use of sugar, discussed under the head of alimentation contains the following:

Cautani says that he is assured that diabetes is very frequent in America, among the negroes of the sugar plantations, who, during harvest, suck the sweet juice of the cane. The author's researches in the medical writings of those who have practiced in warm

climates does not bear out this fact. He then relates a case observed by Brouardel : Two young pastry cooks in order to save the money they made, eat only powdered sugar. After fifteen or eighteen days of this diet, both of them had a confluent furunculous eruption. They were emaciated, but did not show any sugar in their urine upon their entrance into the hospital. They had neither diabetes nor glucosuria. Dr. Cyr believes that while there is a certain predisposing influence in starchy or saccharine aliments, he does not accord to them a predominant place.

In making a resumé he says : A multitude of diverse conditions produce glucosuria, and following their nature, this glucosuria can even present varied quality, although little marked ; but the simplest and the most constant type is none the less the experimental nervous glucosuria. In like manner the diabetic type is hereditary or that of cerebral origin, and the slightly different forms under which it manifests itself are the effects of secondary causes which influence and determine its appearance.

It will be inferred from quotations preceding, that Dr. Cyr draws the line between diabetes and glucosuria, contrary to the teachings of "*notre grande physiologiste*, Claude Bernard," who believes that diabetes is "a disorder characterized by an exaggeration of the normal function." "For this author" says Dr. Cyr "all pathological states are only modifications of the physiological state." \* \* \* Diabetes is glucosuria plus something ; it is a more complex glucosuria, a glucosuria which has evolved. In other words diabetes occupies in the pathological scale a more elevated scale than glucosuria.

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OUTLINES OF THE PRACTICE OF MEDICINE WITH SPECIAL REFERENCE TO THE PROGNOSIS AND TREATMENT OF DISEASE. With Appropriate Formulæ and Illustrations. By SAMUEL FENWICK, M. D. Lecturer on the Principles and Practice of Medicine at the London Hospital. Philadelphia : Lindsay & Blakiston. 1880. Pp. 387.

This book was written by the author because he found that students preparing for their degree desired such a resumé of the treatment of disease, as he prepared for them in his lectures at the end of the college session. The author assumes in the outset that

the treatment of disease is much more difficult than the diagnosis, and upon this theory he omits diagnosis from his descriptions, and confines himself to prognosis and treatment.

Few of the most experienced practitioners would be willing to admit that diagnosis is less difficult than treatment, for the great glory of medicine in this advanced stage of its existence is the art of determining and locating disease. The science of therapeutics is coming on apace, but has not been able yet to run in a line parallel with diagnosis. The author has shown no particular evidence of a great advance in therapeutical science and art. It may be that this work will be acceptable to the English student, on account of the peculiar examinations which he has to stand for, but it will hardly commend itself to the American student.

It has a useful formulary appended, from which we miss many of the standard preparations well known to American physicians.

The publishers have done their part well, but we fail to see what good can result to medical literature by the addition of this volume.

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THE THEORY AND PRACTICE OF MEDICINE. By FREDERICK T. ROBERTS, M. D., B. Sc., F. R. C. P., &c., &c. With Illustrations. Third American from the Fourth London Edition. Philadelphia: Lindsay & Blakiston. 1880. Pp. 1041.

One of the tests of a successful book is the number of editions consumed, this one having reached its third edition in this country. The present edition as compared with the preceding one has much to be said in its favor. Dr. Roberts has revised it thoroughly bringing the revisions as nearly as possible up to the present date, the chapters on the Absorbent and Nervous Systems having received special attention.

The entire field seems to have been re-surveyed by the author, his revision extending to therapeutical agents which have been on trial for a short time. The author's opinion of salicylic acid and the salicylates, does not rank it as a specific. He finds that in the less serious cases of rheumatism that the pyrexia is reduced, and the pain of the joints relieved, by their administration, but that they have failed in a good number of cases and can by no means be implicitly relied upon. They are of little or no value in treatment of cardiac complications, and that in some instances in which these medicines have signally failed, alkalies have proved undoubtedly efficacious.

The local application of alkaline solutions Dr. Roberts has found of little service except when combined with opiates.

The chapter on the clinical investigation of acute febrile phenomena, especially that section on the use of the thermometer is worthy of careful consideration. It is full of suggestive thoughts upon the use of this most valuable clinical means.

We have never known a physician, who having become familiar with this work, did not value it above many others of long-standing reputation, for the clearness and conciseness of its clinical descriptions, and modes of treatment, and also for the broad range of subjects included. So long as Dr. Roberts industriously revises his work, and keeps it as he now does, abreast of the current of medical progress, he will have the satisfaction of knowing that he has a large number of readers in this country.

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THE MEDICAL AND SURGICAL HISTORY OF THE WAR OF THE REBELLION. Part II. Volume 1. Medical History. Being the Second Medical Volume. Prepared under the direction of JOSEPH K. BARNES, Surgeon-General United States Army. By JOSEPH JANVIER WOODWARD, Surgeon United States Army. First Issue. Washington : Government Printing Office. Pp. 869, 4to. With 41 Plates and 44 Photo-relief cuts.

If the preceding volumes of this great work have excited the admiration of the medical profession of the world, the present volume before us deserves, if possible, a higher degree of praise. The subjects here treated by Dr. Woodward, are the most important of all of the diseases which afflicted American soldiers during the late war, and a discussion of them by a master in pathology with all the aids of the morbid specimens before him, together with the hospital records, and a magnificent library, one of the largest in existence, at his command, fairly entitles the work to the very highest rank among the medical productions of this country.

The subject of alvine fluxes was the great question with medical officers during the war, as it is in every war ; and since the war its study has interested many who formerly had the medical care of soldiers. Unfortunately all enquiries into the pathology and treatment of these diseases amounted to nothing more than reflections upon so much of the medical history of them as was retained in the

memory of the writer, and, therefore, of small value. Dr. Woodward has wisely devoted the entire volume to a consideration of the alvine fluxes, as they "usually cause more sickness and mortality among troops during war than any other group of diseases," and "this circumstance affords a better opportunity for their study than can commonly be obtained in times of peace."

It is useless to attempt a critical review of a work of such vast proportions, and as we turn over the sad record of the waste of lives in prisons on both sides, in which the mortality exceeds that of the most virulent epidemics, we are willing to close the book never to return to it again. From a humanitarian point of view we cannot help feeling horrified at the shocking story, in which both sides must share a blame. Where the preponderance of guilt rests we need not say. One day the historian will make the record and it will justly shock all who read it.

As a statistical matter we can value but little the counting of graves by officials after the war; (p. 36) for the shameless way in which outlying graves in every direction were robbed of their contents to fill the national cemetery at Wilmington and the pockets of contractors is a well attested fact.

The foot-notes appended to the text in small type, will serve the future student abundantly, and save much dreary plodding through musty volumes. But even the most diligent and trained student would not have access to the authors from Tulp to Virchow, or having access to them, would not see with the eyes of a Woodward the crystals of truth which lie hidden beneath the venerable vellum.

We had intended to say more of the pathological descriptions of dysentery and diarrhœa, and attempt to convey some idea of the beautiful plates, and photographs. But we must be content with what we have said as we expect to return to this subject at another time.

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A DICTIONARY OF THE GERMAN TERMS USED IN MEDICINE. By GEORGE R. CATTER, M. D. New York: G. P. Putnam & Sons, 182 Fifth Avenue. 1879.

This little volume of 300 pages will serve the student of medicine a most useful purpose. We may say that a knowledge of current medicine would be difficult to obtain except by a knowledge of German, or an admirable guide like this.



## CURRENT LITERATURE.

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### THE SECOND ANNUAL REPORT OF THE PRESBYTERIAN EYE AND EAR CHARITY HOSPITAL

is one of unusual interest, and indicates a progressive and successful career for that institution.

We give an abstract of "Remarks upon Treatment," from the pen of Dr. J. J. Chisholm, which will prove interesting and instructive to the general practitioner.

Among the 2439 individuals treated during the year we have not only seen diseases and accidents of great rarity, but the numerous cases of the individual diseases have given us an opportunity to test the efficacy of new methods of treatment.

Corneal diseases are very numerous in the children of such poor people as frequent the dispensaries, and often both much time and care are required before these eyes are deemed safe and a cure effected. The remedy which has proved most valuable in our hands as a local application for such corneal troubles is *iodoform*. The corneal surface is freely dusted with this substance in fine powder, all surface excavations being filled with it. The application is not painful, even when the colored part of the eye is concealed by a liberal supply of it, and its daily use is very efficacious in exciting a healthy action for the regeneration of tissue. While cod liver oil and the tincture of the muriate of iron are prescribed in internal medication, iodoform powder has to a large extent taken the place with us of the yellow oxide of mercury ointment, calomel powder, the pressure bandage, hot applications, &c., in corneal affections. There is but one single detraction to its use in private practice, viz. its persistent odor, so objectionable to some persons. Atropia drops we continue to use, having found them better borne than eserine. In three cases of diphtheritic conjunctival deposit the iodoform powder acted in the most satisfactory manner in promptly checking the extension of the disease and in rapidly cleaning the surface, so that in a very few days this ugly complication of the previously existing eye trouble had disappeared. In a few cases the application of the actual cautery to corneal ulcers was followed by good results, sometimes promptly relieving the local irritation. Its mode of application was by heating the head of an ordinary pin to a white



heat in alcoholic flame and touching the ulcerated surface with it. The application of the actual cantery was not painful beyond the momentary shock, and by no means so much so as many of the simple preparations in constant use.

The efficacy of another new remedy was most satisfactorily established, viz : the controlling influence which the *salicylate of sodium* has in *iritic inflammations*, whether of a syphilitic or rheumatic nature. In former times, when under large doses of iodide of potassium, this iritic disease would slowly drag its weary course into final convalescence after weeks of much suffering and confinement, under the curative effects of 30 grain doses of salicylate of sodium given every two or three hours we can change weeks into days. The pain I have seen controlled in twenty-four hours, and by the end of the week all injections and other evidences of an acute inflammatory attack vanished. I have had an opportunity of contrasting the two methods of treatment in intelligent individuals, who having known what it was to suffer for weeks under the potash treatment, now no longer dread a recurrence of the specific iritis, experience having proved to them how easily the severity of the attack is diminished, the interval of administration is increased, so that 3 or 4 doses only a day are needful after the first two or three days of treatment.

For *chronic conjunctival diseases* I have, to a large extent, substituted the *alum crystal* for the blue stone, and I think with decided advantage. Its application, when rubbed upon the mucous surface of the lid, is much less painful at the moment, with the discomfort soon passing off. As is well known, the pain from the blue stone application lasts for several hours even when the surface is well washed of all the dissolved salt. The alum crystal can be safely trusted to the patient, who can make applications nightly at bed-time to the inflamed surface and yet not have his sleep materially disturbed from the irritation induced.

In *glaucoma* the advantages from the instillation of a 4 grain solution of the *sulphate of eserine* to  $\frac{5}{8}$  i of water have not been experienced. With most persons the headache induced a few minutes after the drop has been put into the eye is so severe, and continues for so many hours, that the daily instillation can not become a favorite remedy in corneal ulcers, even if it were effective.

I cannot say that I have seen any permanent benefit from its use in arresting the progress of glaucoma, and the knife has usually to follow in the course of time the experimental drop of eserine. For the same reason eserine has not proved itself a valuable remedy in corneal ulcers. Weak solutions are not active for good, and the strong ones are too uncomfortable to be sufficiently long continued. For a similar reason eserine solutions cannot take the place of weak convex glasses in approaching presbyopia. It has been recommended in the growing old eyes of people, to produce forced accommodation by exciting undue action in the ciliary muscle, and thus do away with the necessity of spectacles in a certain class of over-fastidious people. Even one grain of eserine dissolved in an ounce of water will produce headache when dropped into the eye, and the painful discomfort will outlast the period of pupillary contraction which the eserine had produced for the temporary improvement in reading.

After very short trial the experimenter will stop the eserine and accept the less annoying spectacle or magnifying eye-glass with which to do his near work.

The method in constant use at the Dispensary for destroying *wild hairs* is the use of the *actual cautery*. An ordinary sewing needle heated to whiteness in an alcoholic lamp and thrust into the edge of the lid along the shaft of the annoying lash until it meets the hair-bulb, is found the surest, most expeditious, and least painful method for permanently removing them. Should the carefully directed point of the hot needle touch the hair-bulb, there can be no further growth of hair from that source. The imagination of patients makes this operation seem much more formidable than it really is. A hot needle gives only momentary pain, which passes off with extreme rapidity, leaving no after discomfort. It is necessary to hold the edge of the lid firmly in a ring forceps, or the properly directed puncture can not be made.

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Of *cataract extractions*, all those performed in the last quarter were by Græffe's scleral section with iridectomy, connected with the opening of the capsule by Knapp's peripheral section. The object of opening the capsule from above so as to allow the lens to escape as from the mouth of a bag, leaving at all times the smooth surface of the capsule in contact with the inner face of the iris, is certainly

an excellent means of diminishing the dangers of iritis. In some cases, one particularly in which the patient, a female aged 35, with copious deposit of sugar in the urine, and in which I looked for trouble, no intra-ocular inflammation whatever ensued, and most excellent sight was restored. In inspecting some eyes a week after the cataract extraction, I found that while the bag of capsule with mouth above protected the iris from the irritation of any lenticular fragments which may not have been removed, it at the same time facilitated the reception of any blood gravitating from the scleral wound. I have seen blood in the sac in several cases unabsorbed, when the patient was otherwise ready to be discharged; and I am satisfied that capsular thickening, necessitating secondary needle operations for the establishment of a clear pupil, must be much more frequent after this cistotomy than from the old method of tearing up the sac from the front. In the ordinary mature senile cataract, I think that the old method of attacking the capsule by making a large rent in the front is the better one which I have again resumed. I am satisfied that from it I will be able to secure the greatest number of perfect primary successes. I use a solution of pilocarpin gr. i. to 3 i. of water, as an eye drop to be put upon the cornea immediately after the cataract extraction, instead of the atropia solution. Its action is to draw the iris away from the corneal wound and prevent its being caught in the cicatrix. The pilocarpin being painless is far preferable to eserine in these cases. The atropia I use after the second day when the corneal wound has closed.

*In cases of lost eyes*, still good-looking, and from the presence of which sympathetic iritis is feared for the remaining eye, I have practised neurotomy of the optic and ciliary nerves. In this way the lost eye can be cut off from all of its nervous sympathies, and yet be retained for appearances. If this operation proves a permanent relief, it will be infinitely better than enucleation and the wearing of an artificial eye. The nerve section is readily made by separating the tendon of the internal rectus from the eye-ball, passing a curved scissors into the opening and severing all the back connections of the eye-ball, including vessels with the nerves. When perfectly satisfied that the section is complete, replace the eye in position and secure the divided muscle to its old seat of attachment

to the sclerotic. The hemorrhage in these cases is never annoying, and no squint should result if the muscle be properly secured. In the cases in which I have practised neurotomy, the relief from pain was prompt. Time alone can determine whether the new operation will give the same permanent protection that enucleation does. Theoretically it is a very great improvement upon extirpation of the eye-ball. We hope that time will sustain so good a report.

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### CHARITY WORK.

Advice to a young doctor—"Having, in a long time of practice, both from choice and necessity, done a great deal of gratuitous service, I have yet to find a single case where my charity was appreciated. Those who pay nothing always offset it by liberal abuse, which keeps away those who would pay. Your charity case may be a worthy man, but if you were making a struggle to build a house would he work for you at reduced rates (or for nothing)? It is the doctors themselves, who allow their kind feelings to overrun their judgment, that are responsible for this wholesale robbing to which every doctor in this land is subjected. We deal with the most afflicted; so does the undertaker, who is not expected to work for nothing. We can maintain no rights that we weakly yield to extortion.

The doctors are most universally regarded as rich persons who ride about for exercise, and practice for philanthropy, to be paid if everything turns out lovely; if not, they can go to the d—l and must not complain. The people who pay are always grateful; the thieves are like other dead beats, abusive and always most exacting and querulous \* \* \* \* \* If the patient cannot pay for what might save his life, his friends or the public should. It is easier for the town to shoulder the cost than two or three poor devils who had the bad luck to study physic. Now or never is the time to put ourselves on the same footing with other business, and as we have the same losses we must ask for the same gains.—*Canada. Lancet.*

## NEW MEDICINAL AGENTS.

*Hydrobromic Ether*.—Dr. Lawrence Turnbull, of Philadelphia, was the first person to use this comparatively new agent on man, as an anæsthetic. It is a “colorless liquid, with an agreeable odor; it boils at about 106° F., has a density of 1.419 at 59° F.; the boiling point and density are, therefore, intermediate between those of chloroform and sulphuric ether.”—Turnbull’s *Artificial Anæsthesia*, page 57.

It is prepared as follows: Thirty-three parts by weight of absolute alcohol are introduced into a flask or retort, which is placed in ice; when thoroughly cold six parts of amorphous phosphoric acid are added, and afterwards twenty-six parts of bromine dropped in, with the precaution of avoiding too great an elevation of temperature. The mixture is allowed to stand twenty-four hours, and then distilled; the distillate is washed with water, and if acid with a little alkali, and finally rectified over chloride of calcium. The residue in the retort is phosphoric acid; the reaction is analogous to that produced in preparing hydriodic ether.—*National Dispensatory*, p. 112.

A few drachms of this agent on a towel is sufficient to produce complete anæsthesia. Its effects are of shorter duration, and for office surgery it is to be preferred to chloroform or sulphuric ether. The odor of hydrobromic ether is pleasant, and with our short acquaintance with it we think it will fulfill the expectations of its early promise.

We seem to need just now some anæsthetic not as inflammable, volatile, and unpleasant as sulphuric ether, having a shorter anæsthetic stage than chloroform; but longer than nitrous oxide, and altogether we think that this now not only promises to take this place, but also that its period of probation will be far shorter than that of the other agents employed for a similar purpose.

Dr. Turnbull in his book above referred to: “For all minor operations in surgery, at the house of patient or in private office (when the cause of anæsthetic is no consequence, and where disagreeable odor is to be avoided,) nothing has yielded us such satisfactory results as hydrobromic ether.”



*A Glycerite of Iron Subsulphate.*—Mr. L. E. Sayre, Ph. G., observes in the *American Journal of Pharmacy*, November, that a liquid preparation of Monsel's salt, free from acid or irritating properties, bearing a definite and easily recollected ratio of strength to the salt in question, with a basis of glycerin or some other liquid as capable of permeating tissue, is one of the pharmaceutical wants of the present time. That such a preparation would be appreciated by the medical practitioner needs no argument. To be convinced of this it is only necessary to note the frequency with which preparations of various strengths of the substance in question are prescribed to be compounded extemporaneously.

A glycerite containing fifty per cent., by weight, of the salt furnishes, perhaps, the most convenient form, and furthermore, one which possesses qualities which render such a standard of strength most desirable.

The process adopted for its manufacture consists in first preparing a solution of the subsulphate, following the directions of the Pharmacopœia for the solution; this is evaporated in a tarred capsule at a moderate temperature, until a thick viscid liquid is obtained; this then diluted with a sufficient quantity of glycerin to produce a solution of the above percentage. In order use to this process the quantity of dry subsulphate of iron in the officinal solution must be known. By careful experiment it has been found to contain 47 per cent. The use of weight instead of measure, in the formula, is suggested by the writer as being easier and apt to secure more accurate manipulation.

The following process is recommended, the finished glycerite measuring about twelve fluid ounces, the quantity directed by the U. S. Pharmacopœia for the solution:—

Take of liquor ferri subsulphatis 5.127 grains, evaporate to 3.963 grains, continue the heat and add glycerin sufficient to make the weight, 5.760 grains.

This furnishes the easily recollected percentage of dry salt, half its weight being Monsel's salt, each fluid drachm representing about 50 grains of subsulphate of iron—in exact figures 51.08 grains.

It can readily be diluted to any extent without destroying its transparency, either by water or glycerin, and in this respect furnishes, for compounding, an article much superior to the dry salt



of commerce. Its viscidility renders it of that plastic character so very advantageous where the application is intended to remain upon the surface of the affected part, and in addition to the styptic effect of the iron salt, the glycerin exercises its emollient properties in many ways, and particularly in preventing formation of the irritating clots and crusts peculiar to the salt itself or its solution.—*Med. and Surg. Reporter.*

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*Sclerotic Acid.*\*—This acid is probably the active principle of ergot, having a feeble acid affinity, uniting with sodium to form a stable sclerotate. The acid and its sodium salt have the therapeutic effects of ergot, but salt in a less marked degree. Both chiefly act on the central nervous system. In mammals the heart is not influenced by even relatively large doses. At death the respiration ceases before the heart. In mammals the acid accelerates intestinal peristalsis; and it excites contraction both of the pregnant and non-pregnant uterus, preëxisting contractions being intensified so that the organ assumes a paler tint. Nikitin, who has been recently studying its effects says that he calculates that a man weighing about 110 pounds would be killed by about 150 grains of sclerotinic acid. The ordinary hypodermic dose is 0.02 to 0.03 gramme (one-third to one-half grain) three times a day. Sclerotic acid seems likely before long to partially replace ergot as a drug. It has the advantage of remaining indefinitely without loss of strength, if only kept in a dry place and undissolved. Its sodium salt is considered the best form for internal use in the human subject. Hypodermic injection causes a temporary sharp biting pain. Von Ziemssen claims for sclerotic acid over ergotin that the former causes no inflammation at the seat of puncture.

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*Balsamum Antarthriticum Indicum.*—A substance with this name has, during the last two or three years, been introduced into Germany, as a very valuable remedy in acute and chronic muscular and articular rheumatism. It is used as an inunction, and greatly aids, according to Von Hölder, of Stuttgart, the action of salicylic acid. He has also employed it most advantageously in connection

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\* Medical Times and Gazette, Dec. 6th, 1879.

with massage in that troublesome complaint, arthritis deformans. His report was contained in the *Berlin Klin. Wochenschrift* (No. 26, 1878) ; but in the same journal (No. 46, 1878) a pharmacist of Frankfurt, Dr. Hirsch, claimed that this balsam, alleged by Von Hölder to be obtained from a tropical leguminous plant, was, in fact, nothing but an oily product, obtained by distilling the resin of the spruce pine, with, perhaps, some unimportant admixture. Now, however, Dr. Mathes, of Frankfurt, (*Memorabilien*, June, 1879), claims to have proven that the said balsam is a product of the *Eperva falcata*, a tree of French Guiana, and that the observations before referred to, as to its virtue in rheumatism, have been amply verified by numerous and accurate observations of his own.—*Med. and Surg. Reporter*.

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*Ceanothus Americana* (Red-root, Jersey tea) in *Diarrhœa*.—Dr. J. P. Hubbard in the *Medical and Surgical Reporter* sees no reason why we should resort to foreign drugs when we have an abundance of good remedies at home. He contrasts the effects of *Coto* bark with *Ceanothus Americana* (common from Florida to Mississippi and northward) and from an experience of thirty years, in the diarrhœa of phthisis it has never failed him once.

“ It is also a superior remedy in bronchial catarrh and all throat and lung affections ; and in aphtha or thrush I have never seen its equal. While in the army, I found it the best remedy for chronic diarrhœa, combined with opium, at night. I make a strong decoction, in an earthen vessel, sweeten it with loaf sugar or honey, and give as a common drink. A weak decoction, made in the same manner, given to infants, makes an excellent remedy in teething diarrhœa.”

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*Benzoate of Sodium*.—There is no use in being carried away by the enthusiasm which possesses some of our medical confrères, on the subject of benzoate of sodium, either as a remedy for diphtheria or phthisis.

It will come in the way of many our readers to try this old agent a little more carefully before it is relegated to the musty closet of useless drugs.

Dr. Schüller (*Medical Times and Gazette*) gives as the result of

his experience on animals with this agent, that a man weighing 130 pounds must inhale, daily, from one to two ounces of it in a five per cent. aqueous solution. The solution must be made with his distilled water. The patient is to take only moderately deep breaths, very gradually increasing the respiratory force. The amount to be taken is so large that it must discourage those who find the slight exertion of ascending a short flight of stairs a great task.

We would like to hear the results.

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*Antagonism Between Opium and Veratrum Viride.*—Dr. James C. Gardner gives an account of his experience in the antagonism of these two drugs.\* His attention was first called to the fact in treating peritonitis. He gave opium and veratrum combined,—opium two to three grains, veratrum viride five drops—the patient was relieved of pain but did not sleep. In a case of typho-malarial fever he gave sulphate morphia, which caused the patient to sleep, four or five hours, but he awoke with dry mouth and quickened pulse. He added five drops of Norwood's tincture of veratrum to the next dose of morphia, and after three repetitions of the dose the patient was quiet but did not sleep. The veratrum being omitted, the same dose of morphia caused the patient to sleep. In one case, a child, eighteen months swallowed one half grain of morphia sulphate, a serious degree of narcotism resulting. Ten drops of tincture of veratrum administered caused vomiting in thirty minutes, “his eyes opened, he looked around, then looked up in my face and smiled.” His recovery was complete.

Dr. Gardner thinks that in the case of an adult poisoned by opium he would “give the veratrum viride one drachm every half hour or hour until free emesis is established, and to children in proportion. It is not followed by that depression which ordinarily succeeds a full dose of veratrum viride.”

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*Sarracenia Flava.*—This is the most common plant in the savannahs of south-eastern North Carolina. The plant is known locally as the “yellow trumpet,” the flower as the “biscuit” and

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\*Proceedings of Mitchell District Medical Society, Indiana. St. Louis Medical and Surgical Journal, December, 1879.

“watch” The name “fly-catcher” we have never heard as applied to it, and the name “huntsman’s cup,” belongs to the purple *sarracenia*, which has a semi-procumbent leaf, shaped not unlike a gravy boat. The plant with the spots on the hood, is a different one entirely. In fact, *S. flava* has no hood properly so-called, the stem being erect, the wing narrow, and the part of the leaf which is a nodding hood in the *S. variolaris*, flares obliquely backward and upward.

This plant comes to the front as a remedy in diarrhœa, of extraordinary power, upon the authority of Dr. J. Dabney Palmer, of Monticello, Florida. Of course, such an enthusiastic statement as its being a “certain specific in cases of acute and chronic diarrhœa in the adult” needs to be substantiated. Should it prove as useful as Dr. Palmer thinks, North Carolina can contribute several square miles to the supply of the world without missing them.

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*Carica Papaya*, *Papaw*, as a *Digestive*.—Our attention is again called to the active principle of *Carica papaya*, by an abstract of a paper by Theodore Peckolt in the *London Medical Record*, of Dec. 15th, 1879. Peckolt’s examination of the fruit, seeds, and milk of the plant, showed a white amorphous substance, which he calls *papaytin*. He knew that in Brazil the Indians had used the leaves from time immemorial for rendering meat tender, but it did not occur to him that the active principle *papayotin* might be a pepsin-like substance, until he saw in the *Austrian Society’s Journal* notices, by Wittnack and Røy which induced him to review his first experimental analyses. He found a solution of the active principle to possess the power of digesting meat.

A most singular mistake is made by Professor Peyre Porcher, of Charleston, in his excellent “Resources of the Southern Fields and Forest” (pp. 41 and 42) by confounding the North American papaw, *Asimina triloba* with the South American papaw, *Carica papaya*. The two things are about as far apart as two members of the *poly-petala* division can well be.

The former is placed in the *Anonaceæ*, in close relationship with the *Ranunculaceæ*, the latter is now placed in the *Passifloriaceæ*.—  
[THURBER.]

The name, no doubt, by right of priority belongs to the tropical

fruit, the French for which is *Papayer*, but it is not certain whether the French or the other is the original. Gray in his "Genera" Volume 1, page 68, says: The popular name *Papaw* was doubtless given the fruit of *Asimina triloba* from a fancied resemblance in the appearance or taste of the fruit to the papaw of tropical America.

Dr. Porcher's invitation for experiment with the American papaw would doubtless prove disappointing to the experimenter, the two plants having so little relationship to each other.

It will be in order now for one of our enterprising pharmaceutical chemists—say, Parke, Davis & Co., to see what can be made of the plant with this hint.

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*Euonymin as a Cholagogue.*—Dr. W. M. Collins, of London, writes to the *Lancet*—

Having recently made a trial of Euonymin in some cases of hepatic derangement, with defective secretion of bile, I am induced to offer a few brief remarks on its action as a cholagogue.

Euonymin, which has lately been brought into notice by the experiments of Dr. Rutherford, as a hepatic stimulant, is a resinous substance obtained from a species of euonymus (wahoo bark). It differs from most of the ordinary so-called cholagogues, in not producing any intestinal irritation, its action on the liver being direct. It, therefore, does not give rise to the colicky pains and discomfort which so often attend the use of podophyllin, and which tend to prove that the latter drugs act only indirectly on the liver by the irritation it sets up in the duodenum, for which portion of the intestine it had a special affinity. Euonymin is particularly serviceable in cases of hepatic dyspepsia, or what are commonly called attacks of "biliousness," with furred tongue, pale stools, lassitude and general *malaise*, and under its use the tongue cleans, the stools become darker, and the feeling of languor and heaviness disappears. Its action is slow, and its effects experienced most about forty-eight hours after it has been taken. In too large or too frequent doses it may cause some depression. It may be given in doses of two grains twice or three times a week, in pill, before dinner or at bed-time, or one grain on consecutive days before dinner for about a week. It may be prescribed with extract of hyoseyamus, or better still, with



a few grains of the compound rhubarb pill, as it is a feeble intestinal stimulant itself, and requires the combination of some more active aperient, or else the administration of a saline aperient in the morning after. In most classifications of remedies met with in therapeutical works there is no special division made of cholagogues, but those remedies which are supposed to act on the liver are classified under other heads; *e. g.*, podophyllin is included with the cathartics, and, perhaps, properly so, as this remedy only exercises a secondary action on the liver by catharsis. But euonymin, and probably iridin also, as shown by the recent experiments of Dr. Rutherford, may be considered as true cholagogues or hepatic stimulants, since they act directly on the liver.—*Medical and Surgical Reporter*.

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## A DOUBLE DIAGNOSIS.

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An amusing story is told, in the November No. of *Le Practicien*, of a distinguished *savant* at the dinner of the Anthropological Society, Paris. It was not delivered publicly, but whispered in the ear. We have heard a similar tale ascribed to some one else. I visited, said the narrator, a young man aged 15, who without any apparent cause, was getting weaker from day to day. Suspecting albuminuria or diabetes, I asked for the urine of my young client for examination. What was my surprise to find in it a quantity of kiesteine. Assuredly this was not the urine of my patient. On my next visit, in presence of the family, I said you are trying to humbug me. I asked for the urine of this patient, and you have sent me that of a pregnant woman. Scarcely had I pronounced these words, when two persons fainted; the young man and the *bonne* who had opened the door.

She cried out, "Ah! M. Ernest, you have done for me." Light was at once thrown on my mind.

The maid knew why the young man had fainted. She had sent me her own urine, so that unconsciously I had made a double diagnosis. There is another story of the same kind, though in verse, which is untranslatable.—*Medical Press*.—*Lancet and Clinic*.



STATE BOARD OF HEALTH OF MINNESOTA.

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This body met at St. Paul, Minnesota, all the members, seven in number, present.

Analyses of the drinking waters suspected to be contaminated, performed at the laboratory of the Board were reported upon by the Secretary. The samples were from various towns and cities of the State, and some of them were found to be so bad in this respect as to have been directly instrumental in causing typhoid and other fevers in the families which used them. In this way much assistance has been afforded health officers and physicians in finding and destroying causes of disease. Arrangements have been made for the periodic analysis of samples of the water supply of those towns which have water works the object being to assist in guarding against impurities by their speedy detection and description.

The Board has also undertaken a careful study of the well-water supply of towns by an extended series of analysis of waters selected as representative of such supply.

The character of the river supply for drinking and domestic use is also being studied in the same way. The study of the nutritive value of varieties of wheat and of the products of the various modes of manufacture into flour will be begun by the analysis of the grain in the different forms, including bran and shorts. The detection of adulterations in food and drink will constitute a portion of the work in the laboratory for the coming year, the amount of this work being determined chiefly by the articles submitted for opinion.

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DR. ROBERT LEBBY is the member of the Advisory Committee of the American Public Health Association for South Carolina instead of Dr. Chamberlain who is the member from Connecticut.

Dr. Lebbys appointment adds strength to the committee, and we only regret that in following another journal, usually very correct, we fell into error.

## NEW HANOVER COUNTY BOARD OF HEALTH.

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At the regular annual meeting of the New Hanover County Board of Health, Col. Wm. L. Smith was elected President, and Dr. Joshua C. Walker, Superintendent and Secere'ary.

The work done by this Board for the past year has been elementary but important. It was necessary in the first place to make a sanitary survey of Wilmington, upon which to found an intelligent basis for future work. From time to time his survey has been made, until the Board now has a comprehensive map, showing the undrained places, the location of sewers, the labarynth of ditches on the eastern suburbs, and many other points which an examination of the map would alone show.

But they have been confronted at every turn with lack of means to carry out sanitary measures. It is the desire of the Board and they have expressed it in resolutions adopted by them, that the city should increase their power to act. They have seconded the State Board of Health in distributing the pamphlets, "On Drainage, Water Supply and Disinfectants," "On the Limitation and Prevention of Diphtheria," and on "Sanitary Engineering," but all this is the pioneer work of informing the people. The Board works without pay, only the Superintendent receiving a salary, and his work is so largely that of the care of the poor-sick, that he has not enough time for sanitary matters.

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*Internal Use of Tar.*—Professor Reclam, of Leipzig, in a number of the Berlin *Klin Wochenschrift*, July, reports some therapeutic experiments with tar. He used it in pills or capsules, and says that tar water is not so efficient. One curious and constant effect noted was that the urine of a patient taking tar does not decompose for five or six days, instead of in twenty-four hours as usual. The general indication for tar, he says, is a chronic catarrhal inflammation of the mucous passages of the respiratory or urinary tract, as bronchitis, vesical catarrh, gleet, etc.—*Medical and Surgical Reporter.*

A NATIONAL HEALTH ORGANIZATION.

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We have briefly sketched in a previous number of the Journal, the work which the National Board of Health has accomplished. The question of a permanent sanitary department for the nation is to be decided by Congress this winter ; the National Academy of Sciences has appointed a committee, of whom our distinguished fellow-citizen, Professor Gibbs, is one, to consider and advise upon the matter ; the National Board of Trade has also done the same thing, and the present National Board of Health has received such hearty support from sanitarians, railroad companies, steamship lines, and business men generally that its present organization will probably continue without essential change, as it should, especially as its strong friends in the last Congress have become even more convinced of the value and necessity of such a board than they were a year ago. Of course, there are many medical politicians and disappointed office-seekers who wish to have matters different, and not being able to do so take every possible means of placing obstacles in the way.

There are many subjects of great scientific and practical interest to the country at large, which can be investigated thoroughly only by a National Board supplied with an abundant appropriation to enable them to employ the best talent in the work ; and it is of the greatest importance that such enquiries should go on as rapidly as possible, for sanitary science does not begin to keep up with the rapid advance of the most intelligent people and their demand for better means of protecting health. The yellow fever investigation has been admirably begun by the Havana commission, as any one must acknowledge who has read their report, and it should be continued ; but the greatest work of the National Board of Health for many years will probably be in inland and maritime quarantine, in educating the country in general up to understanding the needs of their various sections, and in performing such valuable work as has been lately done in Memphis, namely, furnishing competent and unbiased advice to people who want to do the best thing possible in the way of municipal sanitation.

At the South, the best people are making a heroic struggle to save what they can from the wrecks of their fortunes ; the bummers

and carpet-baggers have over-loaded them with an iniquitous debt, the burdens of which, it is true, in many cases they propose to avoid ; many of the business men have gone there only to make all the money they can, and leave without doing any more than they are compelled to for the benefit of their country, and most of the negroes, being deprived of the care of their former masters, have in their ignorance allowed their shanties to become filthy to an extent not known before the war. It is the less to be wondered at, therefore, that in Memphis, for instance, just as in Salem, Lynn, New Bedford, Gloucester, and many other places in our State, there has been a hope to escape from the evils of bad sanitary conditions for a few years more, until the people felt able better to bear the great burden of expense for municipal improvements ; for Memphis is not so terribly worse than other places nearer home, as the uninformed might be led to think. Of course, there is no real sanitary organization anywhere in this country except in a very few places ; the disastrous interference with travelers and with commerce during the past two summers, by numerous petty "Boards of Health," amply demonstrated this fact, and also that travelers, merchants, railroad companies, and steamboat lines do not propose to submit to any such nonsense much longer. The judicious management and sensible rules of the National Board of Health fully satisfied all these people as soon as they were put in force and here alone would be an abundant field for the future of the National Board of Health, even if there were no other reasons for continuing it, as we have shown that there are.—*Boston Medical and Surgical Journal*.

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#### DOUBLE PNEUMONIA AND ABORTION.

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*Editor Med. and Surg. Reporter* :—On the 11th of March I was called to see, with another physician, a white woman aged thirty-three ; skin very hot, both cheeks flushed, eyes suffused, respiration about twenty-three, pulse 120. Complained of severe pain in both sides of the chest. Cough constantly. Both sides dull on percussion, right side more involved. Respiratory murmur at upper part

of both lungs very loud, accompanied by some fine crepitation. Tongue very broad and flat, deeply furrowed in centre, base covered with a dense, dirty, brownish fur, lips red, breath very offensive. Diagnosed double pneumonia. Ordered a large mush poultice, to cover both sides of the thorax, to be as hot as the patient could endure it. Acetate of ammonia, in one drachm doses, to be given every three hours. Five grains of dextro-quinine every six hours. Eleven A. M., next day, pulse was 120. Right lung more involved, pain more acute, respiration more rapid, mouth dry, tongue more brown, fissure deeper, heat of skin  $103\frac{1}{2}$ . Ordered poultice to be continued, and increased my dose of dextro-quinine to twelve grains, to be given at once, and repeated in four hours. At nine P. M. saw the patient; complained of diarrhœa. Three doses of dextro-quinine were taken, and the symptoms were much improved. For the diarrhœa a few drops of Monsell's solution of iron were ordered every hour. Nourishment principally consisting of milk. Dextro-quinine was given only twice during the night. On the morning of the 12th, symptoms much improved, though the dullness was as great, but heat and restlessness abated somewhat; diarrhœa under control. During the next two days the acetate of ammonia was continued in one drachm doses, every four hours, five grains of dextro-quinine to be given three times a day.

On the 15th I was called in haste to her. Found pulse 135, respiration very rapid, skin very hot; two slight convulsions came on while I was with her. Ordered beef tea and milk to be given frequently, in small quantities. Tincture of veratrum was given in small doses every hour. Four o'clock I saw her again; was told that labor pains were on her. She was four months advanced. Made a vaginal examination, and found the os dilated, perineum soft and yielding, but little hemorrhage, and before I left the house the fœtus was expelled, minus the placenta. The shock this abortion inflicted on the system was fearful; she became semi-comatose, pulse went up to 150, small and thready, breathing diaphragmatic. Several convulsions then came on. Hard ones were on her in twenty minutes or more. Face was pale, skin of body intensely hot, while the extremities were cold. Something had to be done forthwith, and as I put about as much faith in dextro-quinine as most men do in a good brake on an express train, I poured out what I thought to



be a good twenty-grain dose of that drug, which was dissolved in a solution of tartaric acid, and poured it down her throat. This was repeated in an hour. It was certainly marvelous to witness the effects produced. In two hours the pulse was reduced forty beats, and the skin much cooler. Though the convulsions did not entirely subside in that time, they were very much lessened. In three hours more I gave her ten grains again; by night she recovered her senses. Next day I found, to my surprise, that there was very much less solidness of lung than at any other time since I first saw her. I removed the placenta with a hook this day; but very little hemorrhage occurred at any time. The dextro-quinine was now combined with Squibb's tincture of iron, five grains to thirty drops every three hours. From this time on the convalescence went on uninterruptedly. I make no comments on this case, but would ask the attention of the profession to the line of treatment followed, which I believe will be found a successful one in cases, both of double pneumonia, pleuro-pneumonia, intermittent fever, and allied diseases.—L. A. RUTHERFORD, M. D., Macon, Ga.

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## DIABETES INSIPIDUS.

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At the Congress at Montpellier, Lanceraux remarked on the difference between glycosuria and diabetes, insipidus to the effect that diabetes insipidus occurs suddenly, is associated with polydipsia, polyuria and polyphagia. Later in the course of the disease the teeth fall out and prostration and impotence occur. The disease then advances steadily without interruption and continues 2—6 years, death following, almost without exception, from phthisis pulmonum. Post-mortem section almost always reveals *atrophy of the pancreas* and that this condition is the cause of diabetes insipidus is now scarcely to be doubted.—J. T. W., in *Med. Newigh.*, Nov. 29th, 1879.—*Lancet and Clinic.*

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How much longer will it be possible to declare that if a man is really anxious to guarantee to himself six months perfect immunity from preventable disease he must get committed to one of Her Majesty's prisons.—*Mr. Burdett at the Croyden San. Congress.*

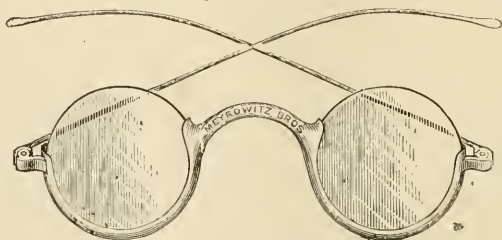


## A CASE CONTAINING TRIAL-GLASSES, TEST-TYPES AND DIRECTIONS FOR THE TESTING OF VISION AND THE DIAGNOSIS OF SOME COMMON OPTICAL DEFECTS.

Messrs. Meyrowitz Bros., of 303 Fourth Avenue, New York, have done good service to the general practitioner in getting up a case of trial-glasses, with directions, test-types, &c., for physicians, especially those in the country, to enable them to make a correct diagnosis in cases of optical defects, &c., and to rescue their patients from the hands of the itinerant spectacle vender.



The box contains convex and concave spherical glasses, running from 1-60th to 1-5th of each series, and the outfit is in no way inferior to the more handsomely mounted case of the specialist.



The whole thing was devised by Drs. D. B. St. John, Roosa, and Edward T. Ely, and made by Messrs. Meyrowitz Bros. at a price so low as to place it within the reach of all.

## TROMMER'S EXTRACT OF MALT.

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If there are any of our readers who have not tried this valuable preparation in their practice, either alone or as an adjunct to other agents for patients afflicted with wasting diseases, they are not aware that they have passed by an article that will serve them in time of need. It fills much the same place as cod-liver oil, malt sugar and dextrin taking the place of the fat. As an adjunct and vehicle for cod liver oil, it is especially useful, as the malt extract is equal weight for weight as a food, with the oil.

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## AN EXCELLENT ADDITION TO OUR DIETARY FOR INFANTS.

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After using Horlick's food for infants for so many months, we find that it is more acceptable to the stomach of children deprived of breast-milk than any article we have used. Nearly every day we hear words of commendation from mothers who have used it. It would hardly be possible to find any perfect artificial food, but this one deserves extensive employment.

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## BUFFALO LITHIA WATERS.

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Buffalo Lithia Springs, in Mecklenburg County, Va.—In view of the extensive use of these waters by the public, and the estimation in which they are held by the profession, we deem some notice of their action and uses not inopportune. Under the above title we include the waters of four springs, distinguished by number. Nos. 1 and 2 are the Lithia Waters proper, Nos. 3 and 4 being Chalybeate Water. Our remarks will be confined to the Water of Spring No. 2, which has gained the widest reputation and possesses the most extended application. This water belongs to the Alkaline class, or perhaps, according to Dr. Walton's classification, to the Alkaline-Saline class. The peculiar virtue of the water seems to rest not alone in the exceptionally large amount of potassium carbonate, but also in the unusual amount of lithia carbonate found

in it, for it has proved more efficacious in certain affections than the simple alkaline waters. Its action on the system may be summed up as follows: It is *diuretic*, increasing the amount of urine, and, at the same time, reducing its acidity; it is *diaphoretic* and mildly *laxative*, in some cases *purgative*; it is decidedly *cholagogue*; it is *blennorrhetic*, modifying and restraining morbid secretions from all the mucous surfaces, more especially those of the genito-urinary organs; it is *neurotic*, restoring tone to the depressed nervous system and producing nervous exhilaration, increases the appetite, promotes digestion, neutralizes acid, and is powerfully alterative. From the foregoing it may be inferred that the extent of its application is wide. The principal maladies in which its use is indicated are, Gout, Rheumatism, Uric Acid, Grave's, Chronic Inflammation of the Genito-Urinary Apparatus, including the peculiar Diseases of Women, Acid Dyspepsia, Nervous Depression, Chronic Malarial Diseases, Engorgement of Liver, Tendency to Formation of Gallstone, etc. Its *modus operandi* in many of these complaints is evident, but in others experience alone has established its value. Various theories have been advanced to explain its action. Its chemical composition marks it out as an efficient agent in the treatment of the so-called uric acid diathesis and the evils that result therefrom, but its influence extends further than a simple neutralizing of the acid, for by its alterative power it so modifies the processes of nutrition as to tend to a permanent relief of the diseased condition. In uterine inflammations its beneficial action has been attributed to its diuretic influence, its tonic action on the nervous system, etc. These waters have ascribed to them, by a number of intelligent professional men, marked power over the albuminuria of pregnancy and also of scarlet fever.

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#### NEW JOURNALS.

*The Clinical News*.—A National Weekly Journal of Clinical Medicine, Surgery and Gynecology. Philadelphia.

*The Practitioner*.—An independent monthly journal, devoted to Medical, Surgical, Obstetrical and Dental Science. Edited by Harvey L. Byrd, A. M., M. D., and Basil M. Wilkerson, D. D. S., M. D. Baltimore, Md., \$2.00 a year. Single copies, 25 cents.

*The Galveston Medical Journal* is announced to be issued on the 1st of January under the editorial management of Dr. Greenville Dowell, assisted by Prof. J. T. Heard, M. D., and Prof. J. F. Y. Paine, M. D. It will be a monthly journal of 32 pages.

Dr. Dowell's reputation will alone assure a large subscription and we wish the enterprise financial success.

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### CARBOLIC ACID POISONING THROUGH THE PREVIOUSLY HEALTHY SKIN.

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The case of a young child of fourteen months, is related by Prof. Edward Zillner at Vienna, who was fatally poisoned by upsetting a can of 30 to 40 per cent. carbolic acid solution. Soon after the accident coma ensued with a very weak and uncountable pulse. There were abundant râles of both lungs. It died without recovering consciousness. No smell of carbolic acid could be detected in any of the organs of the body at the autopsy, but the urine contained whitish flocculi and on the second day had turned of a dirty brown color, in which carbolic acid was detected by chemical analysis.

The case is nearly, if not quite, unique as an example of fatal carbolic acid poisoning in an individual whose skin was previously healthy. A very similar case was published in the *British Medical Journal*, October 8th, 1870, but the child was ill at the time with plenrisy and intestinal catarrh, and may have succumbed to them. Dr. Wicke, of Göttingen records a case (*Deutsche Klinik*, 1869, Nos. 19 and 20.) in which a patient affected 12 years with favus, died in a few minutes after painting the scalp with carbolic acid. As a rule, the blood remains fluid after carbolic acid poisoning, except where the agony is much prolonged.—*Medical Times and Gazette*, Dec. 20th, 1879.

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### CHANGES OF THE PUPIL IN ANÆSTHESIA.

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Gustave Vogel, on the changes of the pupil during the anæsthesia of chloroform, draws the following conclusions from his researches :

(1.) The pupil is at first dilated then contracted ; when this contraction is well marked and rapid, anæsthesia is on the point of ceasing. In other cases the contraction only happens at this moment. A dilatation, when the anæsthesia is profound, indicates threatened asphyxia.

(2.) The globe of the eye is deviated in such a manner that the pupil looks upward ; at time the cornea corresponds constantly with the middle of the palpebral slit ; towards the end of the anæsthesia the globe presents a certain number of irregular movements.

In exhausted individuals, the pupil gives no other signs than the dilatation premonitory of asphyxia.—*Gaz. des Hôp.*

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### AN ENGLISH OPINION OF EMMET'S OPERATION FOR THE REPAIR OF LACERATION OF THE CERVIX UTERI.

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It is easier to find a credulous reader anywhere else than in England. We must confess that the hard-headed opposition which English medical writers make against American surgical or medical innovations must in the long run do us good, but it is not always pleasant reading. We quote what the *Med. Times and Gazette* (December 20th, 1879) says of Emmet's operation.

“We will now define our present position with regard to this subject. We are, of course, not merely willing, but anxious to modify our views (formerly expressed in *Med. Times and Gazette*, July 20th, 1878) if good cause for doing so can be shown us.

“There are two points of view from which the operation may be regarded : first, as a means of repairing the cervix ; and second, as a means of removing local and general symptoms. As to the first we gladly admit everything that is claimed for it. We recognize Emmet's originality in proposing it, and in devising a good method of performing it ; and we entertain not the least doubt, that when properly done, it completely and thoroughly repairs injuries done to the cervix in parturition or otherwise. But looked at from the second point of view—that is, as a means of removing the symptoms—it seems to us that evidence of its value is much needed. It is alleged that laceration of the cervix causes and keeps up cervical endometritis. That this is highly probably, we admit ; but it is not a necessary sequence, for cases are often met with in which laceration and eversion of the cervix exist without any trace of inflammation. Indeed, Dr. Emmet, himself, says that probably some laceration of the cervix takes place in every child-bearing



woman. If it be so, and that these lacerations always cause endometritis, then cervical endometritis ought to be universal among child-bearing women. However, we will admit that in some women laceration and eversion of the cervix may cause inflammation, or prolong its course. It is also said that laceration of the cervix causes sterility. But every one who has seen anything of the diseases of women must know that it is exceedingly common to meet with this condition of the cervix in pregnant women; so common is it, that it seems to us simply absurd to allege that eversion of the cervix can cause sterility. And far more grave symptoms are said to spring from laceration of the cervix—anaemia, dyspepsia, nervous disturbances, phthisis, etc. It is not possible for us here to go into this large question. The opinion in question is supported only by assertions and hypotheses; no proof has ever been attempted. And there are many facts which prove that inflammation of the cervix uteri is, comparatively speaking, a very harmless thing. We will only recommend any who may be inclined to believe this new American revival of an old and long since exploded doctrine, to first study Dr. West's *Croonian Lectures*."

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## RULES FOR THE TREATMENT OF CROUP.

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The following rules are laid down by Dr. W. H. Day, as the result of a long experience in this disease (*Medical Press and Circular*, November 5th, 1879) :

The temperature of the room should not be lower than 65°.

1. The vapor bath is indispensable in the treatment of croup, and should be used at the commencement in every case, and continued unremittingly until all fear of a relapse has departed.

2. All cases of croup are invariably relieved by the vapor bath, especially if the tracheal membrane is dry; when it is moist there might be fear of causing too much depression.

3. The earlier that a case comes under treatment, the greater the probability of a successful termination, because it is then possible to prevent the tracheal secretion becoming organized.

4. The most trying difficulty we have to contend with in the management of croup in the catarrhal form is a relapse, because with it comes exhaustion; and the weaker the patient the less will be the chance of recovery.

5. Tartarized antimony is our sheet-anchor as a medicinal agent;



not so much from any specific effect it exerts on the tracheal membrane, as from its certainty in effecting free and speedy vomiting.

6. Tartarized antimony should, however, be mainly given for the purpose of producing vomiting; that failing, it is comparatively useless, because, if continued in small doses at intervals, its depressing effect is too great.

7. When the emetic has fully operated, if there be much febrile excitement and disordered *primæ viæ*, which aggravate the laryngeal symptoms, a grain of calomel every four hours, or one full dose for the purpose of emptying the bowels and controlling the fever, will be found necessary. In the fibrinous form, when there is violent and acute inflammation, with a firm, hard pulse, and a full reserve of strength, two or three leeches may be applied over the thyroid cartilage, and bleeding can easily be arrested by pressure with the finger, and if need be, with cotton wool; then mercury may prove a valuable addition to the antimonial treatment. Some of my cases improved from the moment the mercury affected the bowels, the fever diminishing, and the expectoration of the false membrane being promoted. When employed in small doses at regular intervals it would appear to diminish the cohesive attachment to the mucous membrane, and to render the lymph less fibrinous and more readily absorbed.

8. When a case of croup, seen at an early stage, and satisfactorily progressing, forty-eight hours have elapsed, we may generally augur a favorable termination; and we should then begin, if not before, to support our patients with good beef-tea, milk and arrow-root, and (it may be) a little wine and water.

If after vomiting the temperature remains high, and especially when the bowels have acted freely, minim doses of aconite every two or three hours are of great service to inflammatory croup. This keeps up a gentle diaphoretic action on the skin, diminishes tension of the pulse, and controls vascular excitement in a very striking manner. At this stage it comes in well, because antimony should not be long continued in any of the diseases of children, and it certainly ought not to be in this disorder.

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## THE DECLINE OF IRIDECTOMY.

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In a paper by Dr. De Wecker, read in the Ophthalmological Section of the late meeting of the British Medical Association, it was stated that sclerotomy had been performed by him forty-eight times for the cure of simple chronic glaucoma. The results had all of them been good. This subject of the substitution of sclerotomy for iridectomy has recently been discussed at length before the Surgical Society of Ireland. Mr. Swanzy read a paper in which he

advocated this method of treatment, as furnishing much better results than iridectomy, in simple chronic glaucoma. The general tone of the discussion that followed suggested a waning confidence in iridectomy, and it appears that this much-lauded operation is ceasing to be so much in fashion. The theories on which it was founded have always been somewhat vague and imperfectly proved; they necessarily differed in accordance with the views taken of the pathology of glaucoma. An increased definiteness has of late been given to the latter, and this fact helps to a more intelligent line of conduct in operating. The prominent symptom in glaucoma is an increased hardness of the eye-ball, due to its being overfull. It has been shown that the chief point of escape for effete intra-ocular fluids is at the angle of the anterior chamber, passing outward through the ligamentum pectinatum into the canal of Schlemm. It has been further shown that in glaucoma this way of exit is obstructed by the adhesion of the periphery of the iris to the periphery of the cornea. Now De Wecker has long contended that the establishment of a cicatrix at the corneo-sclerotic margin offers a new chance for the transudation of the intra-ocular fluids thus relieving the tension. The microscope discloses that in these cicatrices the margins are not intimately opposed, but that there is a semi-transparent substance interposed, which probably allows the passage of the intra-ocular fluids.

This theory is plausible enough, but must await further facts for its confirmation. In the meanwhile it will be interesting to observe whether iridectomy is to be largely laid away among other ephemeral fancies of enthusiastic specialists. It is pretty certain, at least, that it will not be performed as often in the future as in the past fifteen or twenty years.—*Medical Record*.

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## RESOLUTIONS OF RESPECT.

RALEIGH, N. C., December —, 1879.

WILLIAM LITTLE, M. D.

The committee appointed to draft resolutions expressive of the sense of the Academy at the death of Dr. William Little, one of its members, beg leave to report the following preamble and resolutions :

WHEREAS, It has pleased Almighty God to remove from our midst one of our brother physicians, Dr. William Little, a useful member of this Academy; therefore,

*Resolved*, That while we humbly bow beneath the hand of our Heavenly Father, we deeply deplore his untimely death.

*Resolved*, That his brave and patient pursuit of duty under the weight of an ever-present consciousness that he carried about with him an insidious mortal disease which might end his life at any time excites our unbounded admiration.

*Resolved*, That as a kind and affable gentleman, a patient and tender physician, he won the respect and affection of all who knew him.

*Resolved*, That the Fellows of this Academy attend his funeral obsequies in a body, and that in respect to his memory they wear the usual badge of mourning for thirty days.

*Resolved*, That the Secretary be instructed to record these resolutions on the Minutes of the Academy, and that a copy of them be sent to the bereaved family, with assurances of our most profound sympathy with them in this their day of affliction, and that a copy be sent to the NORTH CAROLINA MEDICAL JOURNAL, also to the daily papers of Raleigh.

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|---------------------|--------------|
| JAMES MCKEE, M. D., | } Committee. |
| A. W. KNOX, M. D.,  |              |
| P. E. HINES, M. D., |              |

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## BOOKS AND PAMPHLETS RECEIVED.

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In ReNomination of Philip S. Wales, Pending before the Committee on Naval Affairs. Brief of Rob't Christy, Americus Senâtus.

Theory of the Elastic Arch. By William Cain, C. E. Civil Engineer of the North Carolina Board of Health. From the Author. Van Nostrand & Co., Publishers.

Programme and Itineraries of Cook's Grand Excursions to Europe for 1880. With specially engraved map for Europe. C. A. Barrotoni, Manager of the American Business.

The Practice and Theory of Medicine. By Frederick T. Roberts, M. D., B. Sc., F. R. C. P., &c., &c. With Illustrations. Third American from the Fourth London Edition. Philadelphia: Lindsay & Blakiston. 1880. Pp. 1041. Price, cloth \$5.00, leather \$6.00.

Outlines of the Practice of Medicine, with Special Reference to the Prognosis and Treatment of Disease. With Appropriate Formulæ and Illustrations. By Samuel Fenwick, M. D. Lecturer on the Principles and Practice of Medicine at the London Hospital. Philadelphia: Lindsay & Blakiston. 1880. Pp. 387. Price \$2.50

Bibliotheca Scalliwagiana. Catalogue of a Matchless Collection of Books, Pamphlets, Autographs, Pictures, &c. Relating to Mormonism and the Mormons. The 10 years gathering of Charles L. Woodward, who, enjoying superior facilities for their acquisition, has never let slip an opportunity, whether at public or private sale, of adding to their number, &c., &c.

The Medical and Surgical History of the War of the Rebellion. Part II. Volume 1. Medical History. Being the Second Medical Volume. Prepared under the direction of Joseph K. Barnes, Surgeon-General United States Army. By Joseph Jauvier Woodward, Surgeon United States Army. First Issue. Washington: Government Printing Office. Pp. 869, 4to. With 41 Plates.

# NORTH CAROLINA MEDICAL JOURNAL.

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**M. J. DeROSSET, M. D.,** } Editors.  
**THOMAS F. WOOD, M. D.,** }

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## ORIGINAL COMMUNICATIONS.

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### VESICO-VAGINAL FISTULA.

Clinical Lecture Delivered at the Hospital of the University of  
Pennsylvania, December 17th, 1879.

By WM. GOODELL, M. D.

Professor of Clinical Gynaecology in the University of Pennsylvania.

Reported by WM. H. MORRISON.

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GENTLEMEN :—The first case I will show to you is the result of an operation I performed two weeks ago. The history of this woman is that she had her first labor last June. Labor began early Tuesday morning and the waters came away at 9:30 P. M. of Tuesday. Then began the second stage of labor, which is always a dangerous stage, and one which requires the greatest care on the part of the physician. In this case, the second stage, was delayed and at 6 A. M., of Wednesday, the attending physician sent four miles for a brother practitioner. They resolved to wait and see if nature would not end the labor; but finally they decided to apply

the forceps, for which they had to send a distance of four miles, and relieved the woman at 4:30 P. M., of Wednesday. The result of this long delay, was a vesico-vaginal fistula at the junction of the neck of the bladder and the urethra. This is a bad place for an operation, because at this point two antagonistic sets of muscles meet, the muscle of the bladder drawing in one direction and the circular fibres of the urethra drawing in another. She was operated on two weeks ago, to-morrow. I removed the stitches last Sunday and thus far (Wednesday) there has been no dribbling of urine. I shall now examine carefully and see if I can safely remove the catheter. I feel dense cicatricial tissue, but I am not sure that the operation is a success. We can tell this very readily by removing the catheter. I will remove the catheter and see what the result will be. She has had this short, Skene-Goodman catheter in the urethra since the operation. I have noticed that there is, in these cases of vesico-vaginal fistulæ, a tendency for the little openings in the catheter to become filled up, and my resident, Dr. Millin, has been obliged to remove and clean this catheter every two days; but in cases of ruptured perineum I have been able to keep it in for ten days without it becoming clogged.

This woman felt very hardly towards her physician and thinks they should have used the forceps sooner, but I have told her that her physicians did perfectly right according to their light, and that here in the city where we have every convenience, I had the same mishap happen to me four years ago in a lady who was under my personal care, and that if it was excusable in me, with my opportunities, it ought to be more so in those who practice in the country far away from help. I will now send her out and by to-morrow we shall know whether or not the operation has been a success. I am pretty sure, however, that it is.

Now, in reviewing this case, I think that with my experience, I should not have let this woman go so long before applying the forceps; but there are some physicians who never use the forceps. I had an uncle, by marriage, who had a large country practice, and lived to the age of 90 years, yet, he never owned a pair of forceps, and he told me, either that he never had had a case of craniotomy, or, that he had had but one. He relied on a plenty of lard and more patience. So that this physician, with his light, was justified



in leaving the case to nature, and were he tried for malpraxis I would back him to the utmost. But none of you, with your teachings, would be justified in allowing a woman to go so long without relief, and, were you to get into such a scrape, I,—well I should be very charitable.

The question now comes up as to how long should you wait before applying the forceps? This is a difficult question to answer. My own rule is, to always interfere if the head does not advance in an hour; but if you have not the requisite skill you may safely wait longer, two hours, three hours, or perhaps, four hours.

In the case occurring in my own practice, there was no delay, for I put my forceps on as soon as the head stopped advancing, and even then, I was two hours in delivering the woman. In this instance, the labor was followed, to my great mortification, by a vesico-vaginal fistula which, however, I was able to cure by the use of nitric acid. The fistula was caused by a narrow pelvis and a slight exostosis on the pubic bone and the injury was done by this process of bone. I was very glad to be able to tell this woman of this case.

#### VESICO-VAGINAL FISTULA—OPERATION BY CLOSING THE VULVA.

The next is the colored woman on whom I operated three weeks ago for a vesico-vaginal fistula. In this case, the injury was so great that I had to close the vulva. The history is that the woman was confined fourteen months ago, the pelvis was narrow, craniotomy was required but the consulting physician being averse to the operation it was delayed and a fistula was the result. Three weeks later, after exposure, she had an attack of metritis and nearly lost her life. I brought her before you and tried to find the womb, but was unable to do so, because everything was so matted together from sloughing and from inflammatory deposits. She has not menstruated since her confinement. The reason is that the womb had received so much injury that its function has been destroyed. This makes the third case, in which I have been unable to find the womb, owing to its being so mutilated and so matted to the surrounding tissue. In one of the cases, at three separate operations, I made incisions in order to try to find the womb, and each time got into Douglass' pouch and did not find it out until I touched an ovary, but she recovered each time without a bad symptom, and I finally had to close the vulvar opening.



The operation in this case has not turned out a complete success. We have had perfect union below, but directly under the pubic bone a small opening has been left, into which I can introduce this probe. It is a difficult matter to close an opening in this situation and should I ever have occasion to perform this operation again, I think I should not attempt to close the vulva by one operation, but leave a fistula below, where it can be closed by a second operation, more readily than when it is at the upper part of the vulva. I shall send this woman home and let her come again to have this second little fistula closed.

It is always a confession of defeat, on the part of the surgeon, when he has to close the vulva and it is a great misfortune to the woman, for it destroys her sexual character as far as conjugal relations are concerned. Then, again, there is danger of the lime salts of the urine, forming calculi in the vagina, producing a great deal of irritation and sometimes even ulcerating their way out through the perineum.

#### RETRO-VERSION OF THE UTERUS—DYSMENORRHOEA—STERILITY— TREATMENT BY DILATING THE CERVIX.

I now bring before you a woman who has been married a number of years but has never conceived. She is a powerful, hearty, healthy looking woman. She suffers great pain at her menstrual periods, she has had a number of womb and ovary symptoms and has an endometritis which makes the womb very tender. Before her marriage she had an anteflexion and dysmenorrhœa. Then, after marriage, there was an addition to the regular monthly physiological congestion, the congestion resulting from sexual intercourse: this has produced a double congestion and we have had thickening and catarrh of the lining mucous membrane constituting endometritis. This are seen very rarely as an acute disease, but exhibits the condition of chronicity from the very beginning. In those rare cases, in which it begins as an acute trouble it usually results from some direct injury, as, for instance, an application to the interior of the womb, or from some cold received while menstruating, and is accompanied by great pain and high fever. In this case it came on slowly.

She has also a metritis, that is, a proliferation of the connective tissue of the womb resulting in hypertrophy. This has been caused

by persistent hyperæmia, and by the straining efforts of the womb to expel the menstrual fluid, or, perhaps, the clots that have formed in the womb, so that we get a hypertrophy, just as we do in certain heart trouble, where there is an obstruction to the flow of blood, and which we may call a hypertrophy from necessity. Not only is there an increase in the connective tissue, but there is also hypertrophy of the muscular fibres. This condition is very difficult to cure, but we can do much to ameliorate the symptoms. Pregnancy will sometimes cure it, especially if good care is taken of the woman during child bed, and if she receive ergot, quinia, nuxvomica, all those drugs which tend to keep the womb contracted, expelling the clotted blood and thus favor involution.

I have had her several times before the ward class, but we have given her so much pain in trying to relieve a stenosis that I advised her to take ether and allow us to forcibly dilate the cervical canal. Introducing my finger, I find that while I have been talking about an ante-flexion it is a retro-flexion that we have to deal with, but the same remarks hold good, for we have here the same obstruction, owing to the bend, as we have in the former case. Here, in addition to the dilatation, we shall introduce a pessary, but in ante-flexion a pessary cannot be used so well, because the bladder lies in the way, and very few ante-flexions need any support. As a result of the metritis, I find that the womb measures three and one-fourth inches. This is a great deal too much for a woman that has never borne children. One of the symptoms she has complained of is painful intercourse, this is due to the condition of the womb.

I shall try to introduce and use the dilator without the speculum. After getting it in, I gently turn it and bring the womb into a state of ante-flexion and then dilate. This will do more good than simply dilating. Having, with this smaller instrument (Ellenger's) opened the os sufficiently to use this more powerful one, I shall introduce it, gently turn the womb and dilate forcibly. I feel the end of the dilator touch the fundus, but if I open it in this position I shall be in danger of tearing open the fundus of the womb. I therefore withdraw it half an inch and then dilate. This dilates so easily that I think the instrument must have slipped. I introduce the speculum and find this the case. I do not think it is a good plan to perform this operation without the speculum, for the tendency

of this instrument is to slip out. Since replacing it, I find that I cannot screw the handles home so easily as I did before. When the os dilates easily, I infer that the parts are elastic and will soon spring back and the operation will not do much good; but when some force is required, some of the fibres are broken and the operation is more successful. I now draw the instrument out while open, so that every part of the cervix may be fully dilated.

I shall again introduce the dilator. It is a good plan to take away the ether and allow the instrument to remain until the woman begins to move about.

The after treatment consists of the introduction of an opium suppository into the vagina, or a piece of cotton wool soaked in a glycerole of morphia, so as to forestall any tendency to inflammation. She will remain in the hospital until she feels able to go home, it may be two days or it may be a week, but usually it is from 24 to 48 hours. It is well not to introduce a pessary until the next day, unless the woman can be watched closely. I can recommend this operation of dilatation to you as much safer than the cutting operation, but sometimes dilatation fails and we have to resort to the cutting operation.

This woman has consulted us because she is sterile and we have had her come to the ward class in the hospital, where, a number of times, several of the students, in my presence, dilated the cervix as much as she could bear, without ether. She was each time instructed to have, that night, intercourse with her husband. We thus put her under the best conditions to become pregnant, but our measures have not been successful. I hope, however, that this dilatation will prove successful, but sterility is not readily overcome. The best time for this operation is just after the menstrual period.

I shall now show you how to introduce the pessary. You will find that in the majority of cases the No. 1, of Smith's modification of Hodges' is the proper size. Most physicians make the mistake of introducing too large a pessary. In introducing it, place two fingers in the vulva, separate them, pass the pessary between them pressing upon the perineum, for it is the anterior part which is most sensitive, and then slip in a finger, draw the posterior bar from off the cervix and get it behind, so that it may keep the fundus pushed up. In determining the proper pessary to use in any

case, a good rule, is to always have it short enough for you to be able to get your finger between it and the pubic bone with ease.

There is no part of the treatment of womb disease, on which there is a greater lack of information, than that regarding the use of the pessary. We have a large number of different forms of pessaries, but the one, after which all others have been modelled, is the pessary of Dr. Hodge. This is a cradle or rocking pessary, every movement of the woman, as in breathing or walking, is transmitted to the pessary and so from its constant movement the point of pressure is always changing, and therefore, there is not the same tendency to ulcerate the walls of the vagina, as there would be if it always retained the same position. It lengthens the vagina, which is what we want in cases of ante-version or retro-version with slight prolapse; but there are one or two objections to the Hodge pessary. One is, that from its shape it may occasionally be turned crosswise in the vagina, again, the anterior bar may sometime press upon the urethra causing interference with micturition. In order to do away with these objections, Dr. Smith has bent the anterior part of the Hodge slightly downwards, so that the urethra may lie in the depression thus made, but sometimes we find that, even with this, the urethra is too much pressed upon. This projection at the anterior part tends also to prevent the instrument from being displaced, so that taking it all in all, this Smith's modification of Hodge, is the very best pessary there is, and I advise you to cultivate its use. Still sometimes where the vagina is relaxed, you will have to use a Hodge, or indeed, in some cases a ring pessary will have to be employed. Both the Hodge and the Smith pessaries are liable to interfere with sexual intercourse, so when you wish the woman to get pregnant, you sometimes may be driven to the use of the ring pessary, which does not interfere with the penetration of the male organ, but, on the other hand, it does with the constricting property of the vagina which is an important element in causing the orgasm in the male and female to end at the same time.

## RUPTURED UTERUS—POST-PARTUM HÆMORRHAGE— DEATH—AUTOPSY.

By H. OTIS HYATT, M. D., Kinston, N. C.

June 7th, 1877.—The wife of C. McK., cold. After being in labor for some time, sent for my partner, Dr. Tull. When he arrived, he found that the patient had been delivered of a dead child, breech presentation, and that the woman was flowing fearfully. He immediately injected persulphate of iron into the cavity of the uterus and sent for me. I arrived in one hour afterwards and found that the blood had ceased, the woman cold and pulseless, and death inevitable. Diagnosis—laceration of the uterus. Requested a post-mortem, which was granted. The next morning, about five hours after death, we went out and made the autopsy. The uterus weighed four pounds; length, eight inches; width across the cornua, six and one half inches. The walls were one and a half inches thick through the middle and anterior portion; across the centre of the fundus one inch, and the walls at either horn was only one half inch. The uterus was lacerated on the left side, the laceration commencing at the os and extending one and three quarter inches upwards. The uterus was one inch thick at the highest point of the laceration, and the os was one half inch thick. Hæmorrhage into the left lateral ligament and the circular artery was torn through. I thought of preserving the uterus and for that purpose put it in a jar and covered it with alcohol taken from jars containing other preparations, and to my surprise, in two days time it was decaying so rapidly that Dr. Tull threw it out of the office on account of the odor. I say I was surprised at the rapid decomposition, because just prior to that time, I had read the testimony of an expert given in a trial for criminal abortion, which was to the effect that the uterus was one of, if not the last organ in the body to decay. The rapid decomposition of this uterus when placed under conditions favorable to its preservation, as well as *a priori* reasoning would seem to demonstrate that the testimony, before alluded to, was prejudiced or not sufficiently founded on fact to warrant its being given in a court of justice. It is on account of its medico-legal bearings that I send you the foregoing report.

## SELECTED PAPERS.

### THE DIAGNOSIS OF DISEASES OF THE SPINAL CORD.\*

By W. R. GOWERS, M. D., F. R. C. P.

#### LIMITED FOCAL DISEASES OR "PARTIAL LESIONS."

1. Diseases of the antero-lateral white columns causes loss of voluntary power below the lesion, descending degeneration in the anterior and lateral columns (direct and crossed pyramidal tracts, especially the latter), and over-action of the lower centres. This over-action may be manifested only as excessive knee reflex and developed ankle clonus, or it may increase from this to spasm and rigidity—spastic paraplegia. There is no wasting unless the degeneration extends from the lateral columns to the anterior cornua. Then we have a combination of spasm and wasting in which, if the cornual degeneration proceeds, the spasm and rigidity may lessen as the degeneration advances. In disease limited to the lateral columns (at any rate, when the disease is limited to the pyramidal tracts) there is no loss of sensation or incoördination, and no interference of the nutrition of the skin. These symptoms of "spastic paraplegia" may arise from a primary degeneration in the lateral columns, limited thereto; but such cases are extremely rare, and in the majority the disease is a focal lesion more or less extensive at some level in the dorsal or cervical cord, and the degeneration in the lateral columns is secondary. The evidence of the latter form is afforded by the frequently sudden or rapid onset of the symptoms in the first instance (primary sclerosis being always gradual in onset), and the evidence which may generally be discovered that there has been at some time, or is in some region, damage which extends beyond the lateral column. Descending lateral sclerosis, with secondary spasmodic phenomena in the limbs, may even result from damage to the motor tracts above their decussation—in the medulla, the pons, or the motor parts of the cerebral hemispheres. It occasionally results from bilateral damage to the surface of the brain during difficult birth.

2. In disease of the posterior columns there is interference with

\*An Address delivered before the Medical Society of Wolverhampton, October 7th, 1879.



coördination without loss of power; excentric pains, impaired sensation, and diminution of reflex action, in consequence of the implication of the sensory roots. All these symptoms depend on disease of the root-zone of the posterior columns. Disease of the posterior median column gives rise to no known symptoms.

The posterior columns may be damaged by any pathological process; they are frequent seats of primary degeneration, and then give rise to the common form of locomotor ataxy. The symptoms of this disease usually present the following order:—loss of the deep reflexes, pains, incoördination, diminution of sensation; loss of the superficial reflexes, occasionally interference with the nutrition of bones and joints.

There is no loss of motor power or wasting as long as the disease remains limited to the posterior columns. It may, however, extend forwards into the anterior cornua, causing muscular atrophy and weakness to be conjoined with the ataxy. Or the lateral columns may be affected at the same time as the posterior: we then have weakness as well as ataxy, but no wasting. The disease of the lateral columns causes, as I have just stated, increase of the deep reflexes, and this increase may thus coëxist with incoördination, the increased action of the reflex centres being so great that they are not arrested by the damage to the posterior root (which is often, in these cases, slight). Thus we have the anomaly of ataxy with excess of the knee reflex instead of its loss, and with the front-tap contraction obtainable, and even the ankle clonus.

An important fact to remember regarding the posterior columns is their proneness to degenerate; they recover less readily, than any other part of the cord. A lesion in one spot may set up a degeneration which ultimately involves them in their whole extent. Damage affecting the whole thickness of the cord may pass away from the rest, and persist in the posterior columns, and even spread there. In such a case we have ataxy succeeding loss of power. Strength returns, incoördination remains.

3. The anterior cornua contain the motor nerve-cells, which, as I have said—(1) influence the nutrition of the motor nerve fibres proceeding from them, and consequently that of the muscles; (2) constitute the terminal link in the path of the voluntary impulse from the brain to the muscles; (3), form part of the reflex loop.

probably also of the reflex centre, to which those muscles are connected.

Hence we have as the result of disease of the anterior cornua—(1) degeneration of the motor nerves and wasting of the muscles; (2) loss of voluntary power, *i. e.*, paralysis of those muscles; (3) interference with or arrest of the reflex actions in which these muscles take part.

The extent of these symptoms, whether they are unilateral or bilateral, affect many muscles or few, will depend strictly on the extent of the disease in the spinal cord.

Of the three symptoms the muscular wasting is incomparably the most important. Paralysis may result from disease elsewhere in the motor tract, *i. e.*, disease of the lateral column higher up. Loss of reflex action may depend on disease elsewhere in the reflex loop, *i. e.*, disease of the sensory fibres in or outside the cord. But muscular wasting is due only to a lesion of the motor cells, or to a lesion of the nerves cutting the muscles off from the influence of these cells. In most cases we are able to exclude the latter without difficulty; the state muscular nutrition comes thus to be of the highest importance as indicative of the state of the anterior cornua of the cord.

Disease of the anterior cornua is often combined with disease of the lateral (pyramidal) columns similar to the descending degeneration. Charcot believes that in these cases the degeneration in the lateral column is primary, its symptom, muscular rigidity, preceding the symptom of the cornual disease, muscular wasting, and he terms the affection "lateral amyotrophic sclerosis." I believe, however, that this position will need reconsideration, and that the degeneration in the lateral columns is, sometimes at least, secondary to, or simultaneous with, the disease in the cornua. It often spreads, however, beyond the fibres related to the degenerated cornua, and so may cause weakness and spasm in the limbs below the seat of the muscular atrophy. Thus we have wasting in the arms, and weakness with spasm in the legs, and even, as I have seen, wasting in the shoulder-muscles, and weakness without wasting in the hands.

Certain lesions may damage the motor tracts slightly, and impair conduction in a peculiar way, rendering it apparently unequal in

different fibres. As a consequence the muscular action is unequal in different muscles, and instead of a balance coördinated movement we have an unbalanced jerky movement. This is seen especially when irregular islets of sclerosis affect the cord—disseminated or insular sclerosis—and according to the researches of Charcot it appear that this irregular conduction is the result of the unequal wasting of the medullary sheaths, the axis-cylinders remaining. A precisely similar symptom may result from pressure on the motor tract—as by a growth. Not rarely this “disseminated” or “insular” sclerosis, in one region, is combined with a system-degeneration in another. An occasional combination, for instance, is the jerking movement (from cervical insular sclerosis) in the arms, and weakness with spasm (from lumbar lateral sclerosis) in the legs.

4. A total transverse lesion of the cord at any level, however limited in vertical extent, separates all parts below the lesion from the brain, and hence, so far as will and perception are concerned, produces the same effect as if the whole of the cord below the lesion were destroyed. A section across the cord in the middle of the cervical enlargement, for instance, paralyzes all parts below the neck. Hence the extent of the paralysis indicates only the upward extent of the lesion. This is also indicated by the position of the girdle pain, or zone of hyperæsthesia, which is due to the irritation of the sensory roots in the lowest part of the upper segment—an important indication when the lesion is in the dorsal region, where the precise limitation of motor weakness may be recognized, with difficulty.

The extent downwards of the lesion, its vertical extent, is thus not indicated by the impairment of its conducting functions, the motor or sensory paralysis; and to learn *this* we have to examine the functions of the cord as a central organ, and to ascertain how far they are impaired, and whether they are involved in the primary lesion or are affected secondarily, according to the principles I have already explained. The integrity of reflex action indicates the integrity of the reflex loops, and the study of the superficial reflexes of the trunk is especially instructive in this respect. Excess of reflex action indicates over-action of the reflex centres, and marked excess of the deep reflexes suggests the existence of a descending degeneration in the lateral columns.

The last part of our subject remains for consideration—the elements of the pathological diagnosis, by which, having ascertained the seat of the lesion, we endeavor to learn its nature. To do this, we attend, first to the way the symptoms come on and develop; secondly, to the position and distribution of the lesion; thirdly, to any causal or associated conditions which may present.

We may group the primary morbid states into the following forms:—

(a) Vascular lesions; rupture, causing hemorrhage; occlusion, from thrombosis or embolism (the latter being very rare).

(b) Inflammation: “myelitis,” acute or chronic, causing softening. (It is common to call all forms of softening “myelitis”; we do not yet know how far they are originally inflammatory, or are set up, as in the brain, by vascular occlusion).

(c) Degeneration, or “sclerosis,” in which the nerve fibres waste, and the connective tissue (neuroglia) overgrows.

The term “sclerosis,” is inaccurate etymologically, but seems to be firmly rooted. In some cases the change appears to commence in the nerve fibres, in others in the connective tissue. Some forms of degeneration part by gradations into chronic inflammation (here as elsewhere), and the term “chronic myelitis” is sometimes inaccurately applied to the true degenerative forms.

(d) Pressure from without by inflammatory swelling of meninges or bones, or by growths.

(e) Growths in the cord itself.

We have first to consider how far these several lesions can be distinguished by their onset and course. According to the time occasioned in their development, we may divide them into six classes; those in which the onset is *sudden*, instantaneous or nearly so; *acute*, occupying a few hours to a few days; *subacute*, developing in one to four weeks; *subchronic*, in one to two months; and lastly, the *chronic* cases, which may be divided into those occupying two to six months, and those occupying six months and upwards in their onset.

I have endeavored to show the common relation of the lesions to these several courses in the following table :

|                                   |   | Onset.                       |   |   |   |                             |
|-----------------------------------|---|------------------------------|---|---|---|-----------------------------|
| Pressure<br>or<br>Growths         | { | SUDDEN                       |   |   | } | Vascular lesions.           |
|                                   |   | ( <i>few minutes</i> )       | . | . |   |                             |
|                                   |   | ACUTE                        |   |   | } |                             |
|                                   |   | ( <i>few hours or days</i> ) | . | . |   |                             |
|                                   |   | SUBACUTE                     |   |   | } | Inflammation<br>(myelitis). |
|                                   |   | ( <i>one to four weeks</i> ) | . | . |   |                             |
|                                   |   | SUBCHRONIC                   |   |   | } |                             |
|                                   |   | ( <i>one to two months</i> ) | . | . |   |                             |
|                                   |   | CHRONIC                      |   |   | } | Degeneration                |
|                                   |   | ( <i>two to six months</i> ) | . | . |   |                             |
| VERY CHRONIC                      |   |                              | } |   |   |                             |
| ( <i>six months and upwards</i> ) | . | .                            |   |   |   |                             |

A lesion of sudden occurrence, developing symptoms in the course of a few minutes, is always vascular ; commonly, hæmorrhage, perhaps sometimes vascular obstruction. But a vascular lesion may occupy a somewhat longer time in development—a few hours or days. In acute and subacute inflammation the symptoms come on in the course of a few hours, a few days or a week or two. Chronic inflammation occupies from a few weeks to a few months. Degeneration, in which there is no adequate evidence of any inflammatory process, occupies many months or it may be years. The symptoms produced by growths or simple pressure (traumatic causes excluded) are never sudden or acute, and rarely, if ever, very chronic, the time occupied by the development of the symptoms varying, according to the nature of the cause, from a fortnight to six months.

It is necessary to consider, however, not merely the whole time occupied by the development of the disease, but also the uniformity of its course. Two or more forms of lesion may concur. An initial myelitis, for instance, may lead to a secondary degeneration ; and, on the other hand, in degenerative tissues sudden vascular lesions occasionally occur. So the whole course of the disease must be ascertained, from its commencement to its height, before an inference is drawn.

The onset and course of the symptoms thus sometimes enable us to decide at once that a lesion is of a given character. More frequently they enable us to exclude certain morbid processes, and to

restrict the possible lesion to two or three forms. Between these we have to decide by attention to other indications, and in actual diagnosis it is convenient to consider next the indication afforded by the position and distribution of the disease. As I said at the outset, this indication is never to be employed alone—never, except in subordination to a careful study of the mode of onset and course.

The affections called “system-diseases,” in which one system of structure is affected through a wide vertical extent of the cord, are commonly degenerative in nature: such are lateral sclerosis; posterior sclerosis (locomotor ataxy), the change in the anterior cornua which leads to progressive muscular atrophy (anterior cornual degeneration). These processes *probably* begin in the nerve elements. On the other hand, lesions which have a limited vertical extent—“focal lesions”—are commonly the result of processes which may be either acute or chronic, but begin outside the nerve elements, in the connective-tissue vessels. Such are hæmorrhages, foci of myelitis, spots of “insular” sclerosis, growths, and pressure from without.

But this distinction cannot be employed except after due consideration of the mode of the onset. Scattered acute focal lesions, for instance, may occur widely scattered in the same structure, and produce symptoms limited to certain functions, but of wide distribution, and simulating—indeed, constituting,—a “system-disease.” Thus I have seen sub-acute symmetrical myelitis of the anterior cornua in the lumbar and cervical enlargement causing paralysis and atrophy in all four extremities, the upper parts of the limbs being normal.

Again, a small focal lesion may be limited to one structure, and cause symptoms confined to one function. Thus we may have an anterior cornual myelitis, or a columnal myelitis, lateral or posterior, giving rise to limited symptoms—local muscular atrophy, unilateral paralysis, or local ataxy.

Lastly many “focal lesions” may give rise to secondary system-degenerations. Thus a focus of myelitis in one lateral column may cause descending degeneration in the whole lateral column below, with its attendant spasmodic symptoms. Indeed, so true is this, that, as we have seen, lateral sclerosis, “spastic paraplegia,” is one of the rarest of primary lesions—is almost always secondary



to a limited focal lesion. In all these cases, however, attention to the mode of onset will prevent error.

The combination of mode of onset with seat of lesion sometimes helps us in a more direct manner, especially in the case of growths and compressions in the cord. The characteristics are their limited vertical extent and slow invasion of parts adjacent to that first affected, on the same level. The only other chronic lesion which acts thus is a patch of muscular sclerosis; and the diagnosis between the two may be difficult. It is rare, however, for sclerosis to pass from one side to the other, while it is very common for a growth arising on one side to damage the other by invasion or pressure. Hence the characteristic effect of growth is to cause symptoms due to damage to one portion of the cord, and slowly extend to the opposite portion. The same is true of slow compression, with the exception that the effect is more frequently limited, and it more frequently affects the front of the cord before the back, and bilateral motor paralysis precedes sensory impairment. The diagnosis between the two is also aided by the next indication.

The last element in the pathological diagnosis is the detection of any condition which can be regarded as the cause of the disease in the spinal cord. We have seen that the mode of onset may help us to limit the possible disease to certain forms of lesion: the distribution of the affection may render it probable that it is one or other of these forms; and the detection of a cause of disease of the spinal cord, and the knowledge of the lesions which that cause produces, may help us to fix the nature of the lesion still further. It is important, therefore, in diagnosis to be aware of the several effects of the common causes of spinal disease.

1. *The State of the Vascular System.*—The conditions which favor hæmorrhage are of far less value with regard to the spinal cord than with regard to the brain. Conditions of mechanical congestion—heart disease, emphysema, etc.—favor degenerative changes and also probably thrombosis. The state of the vascular system which is associated with chronic kidney disease undoubtedly favors diffuse degenerative changes in the cord: the occurrence of which has been so ably demonstrated by Sir William Gull and Dr. Sutton.

2. *Scrofula* commonly causes spinal disease by leading to disease of the bones of the spinal column; and the evidence of this, local

tenderness or irregularity in the vertebral spines, or actual curvature, is of the highest diagnostic importance, and careful and repeated examinations of the bones should never be neglected in cases of obscure spinal disease. There is, perhaps, no error in diagnosis which is more frequently made, or which results in graver errors in treatment, than the non-recognition of disease of the spinal bones. It is important to remember also that the damage to the cord may occur before the signs of bone disease are distinct: hence the importance of *repeated* examinations.

In bone disease the cord suffers in at least four different ways:—  
(a) By pressure from the inflammatory swelling of the bone without curvature. The effects of the pressure may lessen as the curvature comes on. (b) By pressure in consequence of the displacement, the bony canal being narrowed by the angular projection of the bodies over which the cord is stretched. (c) By secondary chronic inflammation, with thickening of the dura mater (pachymeningitis,) compressing the cord. (d) By the extension of an acute inflammation from the bone through the membranes to the cord. Hence we cannot, because we find evidence of bone disease, immediately conclude that the cord is pressed upon by the displaced bone. We must investigate the mode of onset of the symptoms and their character, and infer from these the character of the disease of the cord according to the rules now given.

3. *Syphilis*.—The methods by which syphilis causes disease of the cord, which are universally recognized, are—

(a) The growth of syphilomata springing from the connective tissue, the membranes or tissue in the fissures, and invading the cord. In these cases we have symptoms varying in character according to the position of the growth, and similar to those produced by other limited lesions, but always of gradual onset.

(b) By chronic meningitis, with thickening and pressure on the nerves, and sometimes on the cord also. The characteristic symptoms depend upon the damage to both motor and sensory nerves, the former cutting off the muscles and peripheral nerves from the influence of the motor nerve cells, and hence causing muscular atrophy, very similar to that due to disease of the grey matter, but differing by its association with scattered areas of diminished sensitiveness of the skin. The interference with the reflex loops abol-

ishes reflex action in the part; but if the damage is confined to the upper part of the cord and the cord itself is pressed upon, there may be an excess of the reflex action on the lower part.

(c) Syphilitic disease of vessels may *probably* lead to acute softening, similar to that in the brain. Syphilitic subjects may become suddenly paraplegic, and it is probable that it is by this mechanism, although the fact does not at present rest on post-mortem evidence.

All the above lesions originate in the adventitial (adneurial) structures; they are primarily "adneurial" diseases. There is, however, a considerable mass of evidence to show that (d) diseases which originate in the nerve elements and neuroglia, primarily "neural" diseases, more or less degenerative in character, may be a late effect of syphilis, although, except perhaps in the very earliest stage, they are not benefited by anti-syphilitic remedies to the same extent as the adneurial diseases. I believe that in one half of the cases of locomotor ataxy of primary posterior sclerosis there is a history of syphilis;\* and the proportion becomes greater if we include the cases in which the posterior sclerosis is secondary to an adneurial affection. Anterior cornual degeneration (progressive muscular atrophy) sometimes occurs after constitutional syphilis, and so also do the symptoms associated with sclerosis of the lateral columns. Moreover, I have seen disseminated sclerosis (demonstrated post-mortem) follow constitutional syphilis in a manner which afforded the strongest evidence of a causal relationship.

In these cases of degenerative neural disease it does not appear, as far as we can tell, that the anatomical process presents any recognizable difference from that which occurs as a result of other causes; and it is possible that the relation to syphilis, although effective, may not be direct.

The exciting causes of diseases of the spinal cord sometimes afford diagnostic indications. Exposure to cold may cause acute symptoms, commonly due to inflammatory softening—sometimes focal, sometimes diffuse; and in the latter case accompanied by symptoms of meningitis. It may also cause hæmorrhage. It is especially effective in women at the menstrual period. Repeated exposure may lead to degeneration, especially in the grey matter.

\*See paper on "Syphilitic Neuroses," *British Med. Journal*, March, 1879. The same opinion has lately been expressed by Erb.

Acute specific diseases, especially typhoid fever, are occasionally followed by spinal symptoms, due to changes which are probably of the nature of subacute inflammation. It is very common for a patient after typhoid fever, for a long time, sometimes permanently, to suffer from slight weakness of the legs; and occasionally during the course of the disease acute symptoms, as those of anterior cornual myelitis, may occur.

Sexual excess is a more common cause of transient functional weakness than of organic disease.

Traumatic influences are frequent causes of cord diseases. The cord may be directly pressed upon and damaged by displacement or fracture of the vertebrae, or a severe concussion may be followed by slow paralysis at an interval of a few days or weeks. In such a case I have found post mortem numerous minute foci of chronic inflammation, most abundant in the grey matter.

These, then, are the chief etiological facts, which, taken in conjunction with mode of onset and distribution, enable us to form an opinion regarding the nature of the lesion.

To sum up: In examining a case of disease of the spinal cord, the method should be briefly as follows:—First endeavor to ascertain the exact seat of the lesion; note how far the several conducting functions of the cord are impaired, and the highest level of their impairment; then ascertain the condition of the central functions, especially muscular nutrition and irritability and reflex action, first in the part below the level at which conduction is impaired, and secondly at the supposed level of the lesion; and in this way you may infer, without much difficulty, what is the extent of the lesion transversely and vertically. In the next place endeavor to ascertain its nature by considering—first, how the symptoms came on and developed; secondly, which of the lesions having this mode of onset and development are common in the region affected; and thirdly, which of them are produced by the cause or causes to which the disease is apparently due.

This process of diagnosis may seem somewhat elaborate, and, no doubt, a practiced observer does not always consciously go through it. But in most cases, if he wish to avoid error, he goes through it unconsciously, and no step can be with safety dispensed with. We may thus, in almost all cases, arrive at an exact diagnosis of

the seat of the disease, and, in a large number of cases, of its nature also. There are, however, some cases with respect to which the diagnosis of the nature of the lesion can be approximate only, although we can always limit it to one or two possibilities.—*Med. Times and Gazette.*

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### RECOVERIES FROM INSANITY.

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Dr. Pliny Earle, Superintendent of the State Lunatic Hospital, Northampton, Mass., gives a very thoughtful and practical analysis of the subsequent history of twenty-five persons reported as having recovered from insanity in 1843\*. We omit the table for lack of space, and because Dr. Earle's analysis sufficiently explains it.

In an examination, a few months ago, of a reprint in 1863, of the thitherto published reports of the Illinois Hospital for the Insane a table, copied from the report of the Worcester Lunatic Hospital for 1844, and re-published in connection with a memorial to Miss Dix, for the purpose of showing the remarkable advantages, pecuniarily, of the treatment of insanity in its early stages. It presents two columns, or series of cases twenty-five in each. Those in the first column were chronic and incurable; those in the second were recent and had been discharged—all of them "recovered"—from the said hospital in the course of the official year covered by the report.

The official year at that time ended with the 30th of November, and not, as now, with the 30th of September.

While studying the table, it occurred to me that it would be interesting to know the history, subsequent to their discharge of the twenty-five persons who recovered after so short a period of treatment, and at so trifling an expense. Such was the inception of this article, and this the cause for the selection of the table of 1843, in preference to either of its predecessors.

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\*The Alienist and Neurologist, January, 1860, p. 65.

The report gives no intimation that this was not the first attack of some of the patients; it contains no *assertion* that the twenty-five recent cases were *permanently* cured; neither does it allude to the probability, or the possibility, that any one of the persons might again become insane; hence the almost inevitable impression left upon the mind of the general reader, by a perusal of the table, would be, that the twenty-five persons whose insanity was recent had never before been insane; and that now, on the first attack of that disease, they were returned to their homes and to society fully and permanently restored to mental soundness. Indeed, the force of the table depends upon the assumption that they were permanently cured. Furthermore, coupled with this impression would be the inference that, if the twenty-five persons whose disease was chronic had been taken to a hospital in the early stages of their mental unsoundness, they, too, would have been cured. Then follows the practical deduction. If you send your insane friend early to the hospital, his care will cost but \$58.43, if you neglect such early action, his support, while insane, will cost at least \$1,461.30. This deduction was, apparently, the whole ostensible object of the table.

And so we come to the end of the table, and, essentially, to the end of the force of it as an argument. Time and history sometimes deal rudely with the most sanguine hopes, and the most beautiful devices of men. The really surprising results of this investigation are suggestive of extended comment, but they must be dismissed by a brief reference to a few points.

1. The twenty-five persons discharged *recovered* from the hospital forty-eight times, contributing forty-eight recoveries to the statistics of insanity.

2. The five persons who died in the hospitals had been discharged *recovered*, fifteen times, an average of three recoveries to each person.

3. Of all the hitherto-published representations of the curability of insanity, the most unfavorable is that of the late Dr. Thurnam, who based a general formula upon the actual results in 244 persons, (treated at the York, England, Retreat,) whose history he had traced until death.

“In round numbers, then,” says he, “of ten persons attacked



by insanity, five recover, and five die sooner or later during the attack. Of the five who recover, not more than two remain well during the rest of their lives; the other three sustain subsequent attacks, during which at least two of them die."

Let us compare the results of these twenty-five persons, recovered at the Worcester Hospital, with Dr. Thurnam's formula. According to the latter part of the formula, two-fifths of the persons who recover should never have another attack; three-fifths *should* have another attack; and two-thirds of that three-fifths should die insane. Therefore, of the twenty-five persons recovered:

(a) *Ten* should never have a second attack.

(b) *Fifteen* should have a second attack, and, perhaps, more, and

(c) Of these fifteen, ten should die insane.

But we find that, in fact, taking the twenty-five persons *at the time of their first recovery*, they were, under the most favorable construction.

(a) Only seven who did not have a second attack.

(b) Eighteen had more than one attack.

(c) As so many are still living, it is impossible to say what will be the final result in regard to the number dying insane. But already *five* have died insane at the hospitals, and *two* have died insane at home, making a total of *seven*.

Two others are at almshouses, both having been for a long time incurably insane (they will undoubtedly die so), and one has died at home, who "was never well (sane) but a few weeks at a time."

It is no exaggeration of the subsequent aspect of these results to say that they are no more favorable than Dr. Thurnam's formula represents. Their near approximation to that formula is somewhat remarkable.

4. Can our statisticians, philanthropists, and statesmen longer be surprised that the hospitals do not put a stop to the increase of insanity.

In conclusion, it may be remarked that the table itself is an absurdity, inasmuch as it appears to be based upon the assumption that the twenty-five old cases, represented in the left hand column of it, would have been cured if they had been taken to the hospital in the early stages of the disease.

There is, of course, no credence to prove that even one of

them would have recovered if that course had been pursued. In the language of the late Sir Coxé: "No one can tell what would have been the result in any single case, if it had been in different circumstances from those in which it was actually placed."

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## TRACHEOTOMY FOR CROUP IN THE UNITED STATES— ANALYSIS OF 863 OPERATIONS.\*

By WM. M. MASTIN, M. D., Mobile, Alabama.

In the past few years membranous laryngitis and diphtheria have agitated the medical mind to a greater degree, and have been of more serious consideration both in this country and Europe, than the entire vocabulary of zymotic diseases.

Their very close resemblance has afforded most interesting matter for the advocates of each theory; the *unicist* finding abundant material for the belief that the affections are but different expressions of one and the same poison; the *dualist* contending that the two maladies have nothing in common, being totally different, and due essentially to separate and distinct causes.

The obvious reason for this discussion is readily found in the rapid increase of diphtheria in the last decennia, which with the important position croup holds among the class of diseases incident to early life, particularly in crowded districts where the spread of contagion is most rapid, has called forth vast numbers of contributions to the subject, in the form of clinical reports, brochures, and treatises.

In these numerous contributions, the *treatment* has claimed a liberal share of each; and as croup in the large majority of cases has a fatal issue, the subject of *tracheotomy* has occupied a conspicuous position; in the hope that the Art of Surgery might afford some little aid to the, too frequently, useless list of medical therapeutics.

Notwithstanding the attention bestowed on this point, there is still a very great diversity of opinion as to the propriety of opening the trachea; some of the highest authorities directly deprecating

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\*Gaillard's Medical Journal, January, 1889.

the procedure, whilst others, whose opinions are deserving of equal respect, advocate the operation in the strongest terms.

The operation, recommended by Mr. Home, was first successfully performed by John André, of London, in 1782, who opened the wind-pipe in a little girl of five years of age. This case was published in Leyden, in a dissertation by Dr. T. White, four years later; and in 1814 followed the case of Thomas Chevalier, which was reported in the *Medico-Chirurgical Transactions*, London, 1816. In 1825 the illustrious Bretonneau, who first intelligently described diphtheria and gave it a proper position in nosology, added the third case to the record of favorable issues, where the trachea was incised in a child in the last stage of croup; and since then so numerous have been the cases recorded that at present the list amounts to such a large number that the operation should take a position among the justifiable surgical procedures, and will, I doubt not, soon be placed on a firm and definite basis.

The repugnance that existed to the operation, both by the laity and the majority of the profession, is not to be wondered at when we consider the great fatality attending it during the first years of its growth, for the early statistics showed a ratio of successes as to appall the stoutest heart. Thanks, however, to the French and especially to the untiring and enthusiastic advocacy of Trousseau, the tide of popular and professional opinion was changed very materially, when in 1858 that celebrated man presented to the Academy of Medicine, in Paris, the result of 146 tracheotomies (the operations of French Surgeons), with 57 recoveries; with an additional list of 39 operations and 17 cures, which contrasted very forcibly with the statistics presented to the same body twenty years before, where the number of favorable results was but 28 in 140.

In Great Britain at first, the ratio of successes by no means kept commensurate pace with those of the French, since the statistics of her surgeons fell far short of the French reports, and hence the operation languished in the Isles for several years.

By some, this want of success was thought to be ascribable to the lack of that dexterity which characterizes the latter by others to a difference in the type of or extent to which the disease progressed in the two countries; whilst still others attributed it to the more thorough knowledge of the disorder by the French, and particularly to the previous treatment pursued.

As the subject was more deeply investigated, however, surgeons began to appreciate that their whole duty did not end with the mere stroke of the knife; greater attention was bestowed upon the treatment following the operation; and, as a consequence, the statistics of Spence, Cruickshank, and Buchanan, gave results quite as good as those published in France, and the operation in Great Britain appears to-day to be rapidly approaching the position of a *universally* recognized procedure in the therapeutics of croup.

Naturally enough, American surgeons were, in a measure, influenced in their opinions of the operation by the condemnation of their British confrères, and thus, during these early investigations of the French, in America scarcely a single step was taken in this direction. But that state of disregard was not of very long duration, for our surgeons saw little sufferers daily succumb before their eyes to all the horrors of suffocation without being able to raise a finger for their relief. Emetics, mercury, blood-letting, antimony, all, alike proved futile; and the consciousness of their utter inability to afford the requisite aid by such medicinal means, forced them to look to the mechanical measure of opening the trachea to supply their carbonized patients with the oxygen for which they were so terribly struggling. Hence it was, more attention was given to the reports from France—the merits of the operation were examined,—tracheotomy was more frequently resorted to,—and now, with the attention paid to the general condition of the patient, the statistics which are herewith presented will show that, American advances are keeping pace with the progress of trans-Atlantic countries.

It is of interest to re-glance at the course the operation has taken.

The first successful case, although occurring in London, failed to excite the attention among the English which it created in France, and hence they allowed their Continental neighbors to establish an operation for which they claimed the first successful issue.

Thus, in reality, the operation was rooted in British soil but blossomed forth in France; and for its rapid advance and actual acknowledgement and establishment as a sound surgical measure in obstructive inflammation of the larynx, the world is, undoubtedly, indebted to French surgeons.

That tracheotomy is established on a firm basis, is sufficiently

shown by the many illustrious names which are numbered among the long list of its advocates! Were only those of Trousdale, Lagnenbeck, Erischsen, Gross, its supporters, they would be ample to establish any surgical procedure! But compare tracheotomy of to-day with the operation of a half century ago—when its advocates could be pointed out individually,—and, we have a just idea of the strides it has taken.

Now its supporters comprise the entire French school, and the surgical lights of Germany. Great Britain has arrayed in its favor, Brodie, Holmes, Henry Smith, Spence, Thompson, Buchanan, and a host of other eminent men; whilst in the United States tracheotomy has the sanction if not the advocacy of almost every medical man throughout its broad territory; and by the statistics which are here collected will be seen we have a full appreciation of that boon which opening the trachea has conferred upon suffering humanity.

[Dr. Mastin then gives the statistics he was able to collect which he thinks greater than any he has seen in print before.]

The total number of operations tabulated amount to 863,\* with 178 recoveries, and 685 deaths; and include in their scope 26 States and 1 District, viz: Alabama, 17; California, 3; North Carolina, 1; South Carolina, 4; Colorado, 1; Connecticut, 4; Georgia, 5; Illinois, 34; Indiana, 8; Kentucky, 16; Louisiana, 3; Maine, 3; Maryland, 17; Massachusetts, 51; Michigan, 8; Minnesota, 5; Missouri, 95; Mississippi, 7; New Jersey, 2; New York, 432; Ohio, 14; Pennsylvania, 88; Tennessee, 5; Texas, 25; Vermont, 3; Virginia, 6; District of Columbia, 1; and *unknown States*, 5; and by reference to the *general table*, will be found, in addition, the names of the different operators, etc., in each State.

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The majority of statistics of this operation have, heretofore, been based for the most part upon cases collected from hospital life, or from practice in large and crowded cities; and as it is very evident that hospitals and the ill-ventilated apartments, as seen in the allies and by-streets of our larger cities, where numbers of persons are confined in the same room, breathing a poisoned atmosphere,

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\*Of these 296 were *diphtheritic croup*, with 41 cures and 255 deaths. 191 *pseudo-membranous croup*. 573 *croup in general*, (their exact nature not being known) with 90 cures, and 283 deaths.

furnish the worst class of cases upon which to base the proper appreciation of an operation, it is readily seen that a true percentage of the mortality is very difficult to obtain. The cases here presented, were collected from all conditions of life—from the hospital and city practice, and many from villages and rural districts, and so will give a somewhat more correct idea of the results to be obtained from the operation.

In examining these statistics, I shall dwell upon those points of inquiry and interest alone, which present themselves in the cases collected,—comparing them with the expressed views of men recognized as authorities on surgical subjects, and endeavor to impress the fact that the operation of opening the wind-pipe for croup only requires a more general resort, early operative interference, and a closer attention to the details of the same, to bring forth the success which must attend its performance in the future; for, like other successful procedures, as lithotomy and ovariectomy, it is destined to attain a most prominent position in the surgical field of our art.

Pursuing the analysis of these statistics, then, the question of primary importance seems to be, Is the operation of tracheotomy in itself of great danger to life?

We all know that the trachea is a cylinder composed of cartilaginous rings, and lying in the median line of the neck; that it is crossed by vessels at some points; surrounded in some positions by venous plexuses; and has lying across its front surface an intensely vascular gland; but anatomy has taught us the position of all of the structures, and their relation to the trachea at different periods of life; and I can scarcely see, after a careful consideration of the wind-pipe, the tissues divided in opening it, and the relation of the tube to more important ones, how any one will venture to say that tracheotomy is *per se* of particular danger. Yet by some the operation is so considered; and in many of the surgical works of both late and modern date, much stress is laid upon the difficulties attending it, the danger from direct loss of blood, and suffocation from intra-tracheal hemorrhage.

Let us glance briefly at the dangers set forth by some of these authorities, and compare them with the results and complications of the operation as shown in the present statistics.



In examining this list of dangers they all seem about to resolve themselves into the single one of hemorrhage, and an idea of the fear of this—both from the direct loss of blood and bleeding into the trachea—can be quickly obtained by referring to some of the methods proposed for its prevention.

The subcutaneous operation of Guérin, the galvano and thermo cauteries (Amussat, Vernenil, Berger, Palaillon, Krishaber, Auger), the use of caustic paste (proposed by La Clerc and practised by Dujardin,) the actual cautery, and the other various instruments and modified operations, attest to the fear of blood felt by a large number of men.

Of deaths from direct loss of blood, however, but few instances are recorded.

Gross has heard of a half dozen fatal results from hemorrhage, but has never seen it himself; and, although he regards hemorrhage as a danger in the operation from both regular and anomalous distribution of arteries, he thinks the quantity of blood lost is usually insignificant.

Gibson evidently feared the complication of bleeding, since he says, it may be dangerous from the wounding of important blood-vessels. In over 200 cases Trousseau met with but *one* fatal accident from this complication. Liston writes: "This operation, as I said before, is one not attended with great difficulty or danger. The wound can be made down upon the wind-pipe without involving any vessel of importance. There are sometimes arterial branches running across the wind-pipe; but this is very rare."

Dr. Joseph Pancoast, of Philadelphia, in many cases, has never met with any serious difficulty and sees nothing to endanger life in the mere manipulation. Dr. Pilcher, in his excellent brochure, found hemorrhage the chief complication, and notes 19 instances out of 121 operations where it was troublesome, but does not mention one single death from that source. Chelius believes dangerous hemorrhage to be feared from the thyroidean arteries and vena plexuses, when the tube is incised below the cricoid membrane.

Professor D. Hayes Agnew, and John Ashhurst, and Drs. J. H. Packard and R. J. Lewis, of Philadelphia, each of whom have repeatedly performed the operation of tracheotomy, all say that, there is very little risk attending it; and neither of them refer to any dangerous complication.

In the last edition of his great work on surgery, Gant, advises that care be taken to avoid wounding the thyroid gland, less troublesome hemorrhage be the result; and directs that it, with any crossing vessel be drawn out of the line of the cut, but does not speak of any *particular* danger from bleeding. Velpeau, Townsend, Boyer, Skey, and, indeed, all surgical writers, dwell especially upon the dangers of hemorrhage in the operation. That greater danger exists, however, from blood passing into the trachea—causing apnœa of the patient—is more especially referred to; and all surgeons agree that blood flowing into the wind-pipe is to be seriously apprehended. This is most frequently venous, and is to be more especially considered in tracheotomy behind the thyroid isthmus, and in cases where the obstruction to respiration is very great and of long duration,—causing intense venous congestion. That the same danger does not obtain equally in the higher cut, where the cricoid cartilage and first ring of the trachea are divided (laryngo-tracheotomy), is, at once, apparent. However, in a collection of 979 cases (including 116 cases of extraneous bodies and obstructions other than croupous), with the exception of the 19 cases of Dr. Pileher, above noted, I have not received the slightest mention of these complications, but on the contrary many of the operators wrote that their operations were easily executed.

From these histories then, the legitimate conclusion is that, such dangers have been overated—that fatal hemorrhage is *very rare*, that suffocation from intra-tracheal bleeding is not frequent,—and that a slow and careful dissection—tearing rather than cutting,—pushing aside all important vessels and tissues, and securing perfect dryness of the wound before opening the tracheal wall, which can usually be done with comparative ease under an anæsthetic, will absolutely prevent the first, and reduce the second complication of hemorrhage to a minimum.

In further proof, then, that tracheotomy is a procedure attended with little or no immediate danger to life, if properly and carefully performed, one has but to examine the published statistics of the operation for foreign bodies. Without referring to these numerous statistical tables, I will only mention 116 cases for foreign bodies and localized laryngeal diseases, which have incidentally fallen under my observation, and hence taken indiscriminately. Of these

316 cases there was a mortality of but 9 (1 in every  $12\frac{2}{3}$ ); and death in these was due to other causes than the operation, such as lateness of the operation, slipping off the extraneous body down into the bronchi, disease of the tube low down, and pulmonary complications.

The number of impediments and diseases for which it was here performed are as follows : foreign bodies, 97 ; syphilitic laryngitis, 4 ; perichondrial abscess, 1 ; œdema larynx, 6 ; laryngeal growths, 5 ; epithelial cancer, 1 ; spasmodic laryngitis, 1 ; tonsillitis, 1. These comprise most of the local troubles necessitating tracheotomy, and, as will be seen, include a trouble (epithelioma) which under any circumstance would have ended fatally.

Of other complications rendering the operation dangerous or difficult, as cutting through the posterior wall of the trachea, slipping the canula into the cellular tissue outside the wind-pipe in short, thick necks ; pushing a dense false membrane before the point of the knife, etc., etc., nothing need be said, since these should not be classed among the attending dangers of the operation, but are the result usually, of carelessness, haste or fear, and should scarcely ever occur to seriously embarrass the operator and be the cause of a fatal termination.

Danger from shock and also secondary hemorrhage require no mention, for they may complicate the most trivial operation, and do not obtain particularly in tracheotomy.

Seeing that merely opening the wind-pipe very seldom of itself produces death, we very naturally ask, What is the cause of death in tracheotomy for diphtheritic and croupous laryngitis ?

Without doubt among the earlier operations to a want of appreciation of the systemic condition, of which the laryngeal inflammation was but frequently an expression, with an ignorance of the exact pathological lesion of the disease, and regarding tracheotomy as a *cervative measure*, must be attributed the large mortality attending the operation.

But the death-rate is much lessened since more thorough investigation has given us a better knowledge of these points. We have come to know that the laryngeal lesion is often the result of, or complicated with a constitutional or blood poison, and the obstruction to free respiration is not the only factor in the case ; and that tracheotomy is not intended to cure the affection, but must be

viewed simply in the light of an auxiliary to other measures—to prevent death from suffocation, admit pure air for the proper aëration of the blood, and to *gain time* in the further treatment of the malady. Concluding that the operation of tracheotomy is one fraught with little risk, we can at once decide that the cause of death must be dependent upon the disease itself for which the operation was required—a persistence of the original disease or obstruction,—or sequelæ, or intercurrent complications.

Without adducing quotations from numerous authorities and traversing ground which has been so often passed over, we will look to the causes of death in the present cases.

The causes of death here about correspond to the causes as given by other published statistics.

Of the 863 operations collected, I have succeeded in finding out the causes of fatal termination in 313, which will be seen in the subjoined table.

TABLE OF MORTALITY CAUSES IN 313 CASES.

| CAUSE.                                 | No. CASES. |
|--|------------|
| Cardiac paralysis.....                 | 2          |
| Pneumonitis.....                       | 30         |
| Pulmonary Congestion.....              | 4          |
| Exten. Mem. Causing Obstruction.....   | 103        |
| Asthenia.....                          | 57         |
| Capillary Bronchitis.....              | 40         |
| Pulmonary oedema.....                  | 1          |
| Exhaustion.....                        | 18         |
| Accumulation below tube.....           | 4          |
| Asphyxia.....                          | 13         |
| Suffocation on table.....              | 2          |
| In Artic-Mortis.....                   | 6          |
| Accidental Displacement of Canula..... | 3          |
| Scarlatina.....                        | 2          |
| Carbonic Acid Poison.....              | 7          |
| Plugging of Canula.....                | 4          |
| Convulsions.....                       | 3          |
| Erysipelas.....                        | 1          |
| Miliary tubercle.....                  | 1          |
| Emphysema.....                         | 2          |
| Tracheal granulations.....             | 1          |
| Anæsthetics.....                       | 3          |

It will be proper to mention that of these, two (2) deaths were due to chloroform, one (1) to ether, two (2) to plugging of the canula through the carelessness of the nurses, nine (9) were moribund at the time of the operation, three (3) to outside causes not connected with the original disease or operation, three (3) to accidental displacement of the canula through extreme carelessness, one (1) to convulsions due to indigestible food, two (2) to pneumonia caused by leaky roof and *unusually* bad hygienic surroundings,

two (2) to scarlatinal poison, and one (1) to the choking of a very poor "home-made" tube.

By referring to the above table it will be seen, as would be expected, that the greatest mortality cause was the *extension of the membrane*, having produced death in 103 instances. The next in order was *Asthenia*, or blood-poisoning, which caused a fatal issue in 57 cases; the rank *Capillary bronchitis*, 46; *pneumonia*, 30; *exhaustion*, 18; *asphyxia*, 13; etc.

The large preponderance of the extension of the pseudo-membrane as a death cause, may be reasonably explained, I think, by concluding that the morbid process had already extended beyond the larynx into the trachea before the knife was resorted to;—or, in other words, that the exudation had begun to form some distance down the trachea itself, and in a number of cases was below the opening made by the operation. This point, of course, would be hard to determine, but as we know the exudative process first begins in the larynx and goes downward, and that it most probably confines itself to the larynx during the first stage of the disorder, we next feel interested in the *stage* at which the operation offers the best chance of success.

Upon this point a number of surgeons positively assert that the operation should be regarded as a *dernier ressort*, and hence performed in the very last stage, when death from suffocation is impending.

In confirmation of *late* operations Guersant, in 1835, advised that tracheotomy be resorted to when the disease was approaching its *last stage* (suffocation); and again in 1873, among general indications for the operation, he expresses the same belief, viz. : that the dyspnoea shall be *permanent* and not intermitting.

M. Bouchut recommends it when a state is reached tending to asphyxia, when a single *paroxysm* might cause death. Skey writes that, when the symptoms are *imminent* an artificial opening should be made. Syme believed that only *desperate* cases call for the operation. Velpeau said, tracheotomy is required when a mechanical obstruction, of whatever source, exists, which is *about producing suffocation*.

Dr. J. Lewis Smith, of New York, in a discussion at a meeting of the N. Y. Academy of Medicine, March 15, 1877, professed



himself an advocate of tracheotomy when there was great lividity from the *embarrassment to breathing*, since it *rendered death more easy*. William Squire proposes tracheotomy when *suffocation is threatened*.

These are the expressed views of some of the advocates for postponing the operation to the last moment ; but the tendency, however, towards *early* operative interference is decidedly increasing ; and in opposition to the opinions of the men just named, are the majority of surgeons, especially those who have lately written on the subject.

Steiner, one of the most recent contributors to the subject of croup, advises in decided terms, that the wind-pipe be opened at an early stage. He writes, "*As to the time when tracheotomy is to be performed*, I agree with those writers who urge *an early operation*, and do not defer it until urgent symptoms of carbonic acid poisoning have manifested themselves." Further on he gives the *beginning of the third stage*—when remissions in the paroxysms of dyspnoea begin to grow less frequent—as the proper one for the operation.

In a clinical lecture on the "Surgery of the Larynx," lately delivered, Prof. S. D. Gross said, "speaking of tracheotomy, the operation is almost always performed too late in cases of diphtheria. The system is allowed to become thoroughly poisoned by the morbid element before tracheotomy is proposed. If it were done early in this disease, the probability is that life would much more frequently be saved. West, in 1859, declared that, "my chief anxiety is to make out the indications which may justify me in having more timely recourse to it in future." Hardy and Beheir say it is to be performed whenever, notwithstanding an appropriate treatment, the symptoms indicate extension of the false membrane. M. Ollivier *decidedly* favors *early* operations. Trousseau laid particular stress upon an early operation, and says, "It must be performed *as soon as possible*." And again, in a more recent publication writes, "*the chances of the success of the operation are so much the greater in proportion as it has been the earlier performed*." Thomas Bryant, follows, he says, Trousseau, in advocating the procedure at an early date. By Niemeyer an early period for operating is also advised, and he says, if after twelve hours trial of the usual remedies the symptoms remain unabated, do not lose further time, "but



proceed at once to tracheotomy." Again he writes,—the only hope of success depends upon an early operation." Roberts, in his articles on diphtheria and croup says, when there is much obstruction to the breathing, and the membrane is increasing—as shown by a continuance of dyspnœa,—notwithstanding the medicinal treatment, tracheotomy should be performed without delay. Aitken in his work on the Practice of Medicine states that, tracheotomy should be resorted to "*at a much earlier period in the disease,—not as a last resource, when death from asphyxia appears imminent, and after treatment of the most depressing kind.*" He thinks the proper moment for the operation is, when the child elutches at its throat and is anxious and restless.

In a MS. letter from Prof. D. Hayes Agnew is expressed the belief that "the great difficulties lies in late operations;" and Dr. Jno. H. Packard says, "My firm belief is that we are too slow to resort to the operation."

The last quotation I will use in substantiation of operations at an early period in croup, is the eloquent language of Dr. Pilcher, who thus expressed himself: "*Justice to my patient, justice to myself, fidelity to the profession I represent, all unite in demanding that Now, early, before the development of conditions which will make any interference but a forlorn hope, tracheotomy should be done.*"

But statistics speak in the loudest tones!

Out of 863 tracheotomies I have succeeded in tabulating the dates at which 150 operations were performed after the onset of the disease.

TABLE SHOWING TIME OF OPERATION AFTER INVASION OF THE DISEASE IN 250 CASES.

| No. CASES. | PERIOD.                             |  | DEATHS. | CURES. |
|------------|-------------------------------------|--|---------|--------|
|            |                                     |  |         |        |
| 10         | From 1 to 24 hours inclusive.....   |  | 7       | 3      |
| 45         | " 24 to 48 hours inclusive.....     |  | 30      | 15     |
| 32         | " 48 hours to 3d day inclusive..... |  | 22      | 10     |
| 25         | " 3d to 4th " ".....                |  | 18      | 7      |
| 24         | " 4th to 5th " ".....               |  | 19      | 5      |
| 20         | " 5th to 6th " ".....               |  | 13      | 7      |
| 13         | " 6th to 7th " ".....               |  | 5       | 5      |
| 7          | " 7th to 8th " ".....               |  | 6       | 1      |
| 12         | " 8th to 10th " ".....              |  | 9       | 3      |
| 62         | Very late.....                      |  | 46      | 16     |

Referring to this table it will be seen that the exact period of each operation is given up to the *tenth* day inclusive, and all those occurring after that date and those where the operation was executed in cases on the border of suffocation (the period not being known) are classed as occurring *late*. It will also be found that the largest number by far, were operated upon *late*—when suffocation was threatening—having been performed 62 times in that stage. The next most frequent period was from 24 to 48 hours; then 48 hours to the 3d day; then 4th to 5th day, and so on.

\*       \*       \*       \*       \*       \*       \*

There is a sufficient number, however, to establish beyond a cavil the expediency of early operations; and as soon as it is broadly accepted that the mere incision, required in opening the wind-pipe, does not add to the dangers of the existing disease, then the operation will be resorted to at the moment the practitioner feels convinced that a pseudo-membrane is beginning to form, and the results will then give the true percentage of cures which are to be derived from the operation.

At any rate when tracheotomy is performed as frequently in the early stages of croup as it is now resorted to in the last or stage of asphyxia, the successes will, I feel assured, place the procedure among that class of operations which are considered *successful*.

Before passing on to another point it will be well to mention that some few men have suggested that, if performed at an early period in the disease, tracheotomy might go farther and have some claims to being a direct curative measure. The most emphatic among these, of which I know, is Steiner, who expresses himself thus: "All the indications are in favor of early operations; in fact, I venture to say that, when properly performed, tracheotomy may be a safe-guard against the further spread of the croupous process."

This, to my mind, has quite a degree of probability attached to it. No one will venture to deny that one of the prime factors in the treatment of an inflammation is *rest*. What one of us who is called upon to manage a gastritis will not first attend to putting the stomach at rest by reducing or entirely forbidding the ingestion of food? or to treat a cystitis or an enteritis and not strictly enforce rest of the inflamed viscus? Why then should not rest be of considerable importance in the treatment of membranous laryngitis?

The muscular apparatus of the larynx is, in a measure, kept in constant action by the process of normal respiration, and when an inflammation exists, and particularly when it becomes obstructive, greater action of the laryngeal muscles are produced by the efforts at breathing; and, by a prior reasoning, the morbid process is increased. The passage of a stream of air, too, over the inflamed membrane, may act as an irritant, and assist to keep up or increase the distress. Hence, opening the trachea at an early date—when the membrane is just forming and before the trachea is invaded,—may, by giving *rest* to the larynx, limit the further spread of the croupous deposit.

The next point treated is the *ages* at which the operation is attended with the greatest success.

The following list gives the ages at which 320 tracheotomies were performed, with the number of cures and deaths at each year :

TABLE OF AGES IN 320 OPERATIONS.

| No. CASES. | AGES.                                  | SUCCESS. |            |
|------------|--|----------|------------|
|            |  | SUCCESS. | UNSUCCESS. |
| 1          | From birth to 6 months inclusive.....  | 0        | 1          |
| 21         | " 6 months to 18 months inclusive..... | 4        | 17         |
| 25         | " 18 months to 2 years.....            | 6        | 19         |
| 23         | " 2 years to 2½ years.....             | 6        | 17         |
| 36         | " 2½ years to 3 years.....             | 9        | 27         |
| 11         | " 3 years to 3½ years.....             | 2        | 9          |
| 40         | " 3½ years to 4 years.....             | 12       | 28         |
| 18         | " 4 years to 4½ years.....             | 4        | 14         |
| 62         | " 4½ years to 5 years.....             | 25       | 37         |
| 30         | " 5 years to 6 years.....              | 8        | 22         |
| 7          | " 6 years to 6½ years.....             | 0        | 7          |
| 13         | " 6½ years to 7 years.....             | 5        | 8          |
| 12         | " 7 years to 7½ years.....             | 7        | 5          |
| 7          | " 7½ years to 8 years.....             | 2        | 5          |
| 5          | " 8 years to 9 years.....              | 0        | 5          |
| 1          | " 9 years to 10 years.....             | 0        | 1          |
| 2          | " 10 years to 11 years.....            | 0        | 2          |
| 2          | " 11 years to 12 years.....            | 0        | 2          |
| 2          | At 14 years.....                       | 2        | 0          |
| 1          | " 19 years.....                        | 0        | 1          |
| 1          | " 35 years.....                        | 1        | 0          |
| 1          | " 40 years.....                        | 0        | 1          |
| 1          | " 52 years.....                        | 1        | 0          |

\* \* \* \* \*

The *method* of operating has been, by a few, thought to exercise some influence over the termination of tracheotomy.

The method of operating in this collection was determined in 343 instances.

It is beyond question, however, that that operation which dispenses with the introduction of all instruments into the trachea, is

theoretically, the proper procedure ; for, besides the trouble frequently produced by a long residence of the canula in the wind-pipe, the canula may at first be sufficiently irritating to produce a deposit of pseudo-membrane at the points where it impinges upon the mucous coat, and from these points a new spread of membrane may take place.

\* \* \* \* \*

*Remarks.*—It has been shown that this collection embodies eight hundred and sixty-three operations, with six hundred and eighty-five deaths and one hundred and seventy-eight recoveries, making the proportion of cures as one to every four and three-fourths cases; but the proportion of deaths is unnecessarily increased by *forty* cases which should be excluded, since death in them was attended by such complications that their exclusion from the list seems warrantable. The complications of which I speak are namely : Death by anæsthetics, 3 ; moribund at operation, 21 ; death from scarlatinal poison, 4 ; from choking of a “home made” tube, 1 ; from carelessness of the nurse—letting canula become displaced, 3 ; from tube getting plugged through carelessness of the nurse, 2 ; from erysipelas, 1 ; from outside complication, 4 ; and from convulsions due to indigestible food, 1.

This makes the proportion as one hundred and seventy-eight cures to eight hundred and twenty-three operations (one in a little over four), instead of one hundred and seventy-eight recoveries to eight hundred and sixty-eight tracheotomies ; which I regard as the correct average of success.

Again, an estimation of the recoveries, in proportion to the operations performed, between the Northern and Southern States was made, but only negative results were obtained on account of the insufficient data,—the proportion, of course, being nearly equal in the two sections.

From the somewhat hurried analysis of these statistics, with the generally received opinions on the subject of tracheotomy, the annexed conclusions are deducible.

*First.*—That tracheotomy is *per se* almost devoid of danger ;

*Second.*—That fatal hemorrhage should almost never occur ; and care with coolness will nearly always prevent apnoea from intracheal bleeding ;

*Third.*—That age offers no contra-indications, although the average of success is less in early infancy and adult life ;

*Fourth.*—That early operative interference—whenever the paroxysms of dyspnoea become at all lengthened—is demanded, since delay only adds to the suffering of the patient, and materially lessens the chances of recovery ; and

*Fifth.*—That the after attention is of prime importance ; careful attention of the wound, proper treatment of the disease, and proper nursing with fair hygienic surroundings, being the essentials to a successful issue.

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*Treatment of Phagedænic Chancres*, by MR. JONATHAN HUTCHINSON.—The sore is freely and carefully cauterized with acid nitrate of mercury, and the patient made to sit eighteen out of twenty-four hours in a warm hip-bath. He states that phagedænic chancres often occur in persons who have had syphilis before.

Mr. Hutchinson warns his class not to tell their patients that syphilis cannot occur twice. A second attack of syphilis is usually peculiar. It is seldom in such cases that a well characterized indurated sore is developed, and very frequently the sore sloughs. The phagedæna may prevent the occurrence of constitutional symptoms if it comes on early enough. He has seen, however, severe constitutional symptoms follow a phagedænic sore in man who had gone through syphilis some years before ; indeed, some of the worst cases of syphilis rupia he has seen occur under these conditions. When syphilis runs its most usual course—a well-indurated sore, a symmetrical copious papular or blotchy rash, and symmetrical sores in the tonsils—you may assume that it is a first attack. Second attacks are almost always modified, and are either much worse or much more slight.

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*Ethereal Oil of Mustard in Malarial Fever.*—Haberkörn has very successfully employed the ethereal oil of mustard, on account of its anti-bacterial properties in the pernicious fevers of malaria. He gives two or three drops a day in a great quantity of distilled water, or better from 2 to 4 drops in a 10 per cent. alcohol solution. His results have been “most remarkable.”—*London Medical Record*.

## EDITORIAL.

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
### NORTH CAROLINA MEDICAL JOURNAL.

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A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED  
IN WILMINGTON, N. C.

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M. J. DeRosset, M. D.,  
THOMAS F. WOOD, M. D., Wilmington, N. C. } Editors.

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### THE RELATION OF DRUG MANUFACTURERS TO THE PROGRESS OF THERAPEUTICS.

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If we are to have a symposium on this subject, let each medical journal say its mind without reservation. We have Dr. Edes in the *Boston Medical and Surgical Journal*, the *Louisville Medical News*, and *New Remedies*.

We are able to express our belief that the medical profession owes very much to the chemical and drug manufacturers for reasons:

The medical profession during a period from 1860 to 1870, had lapsed into a state of universal skepticism on the action of drugs, so that many old practitioners fell in with Dr. Hughes Bennett's limitation of remedies to a lean half dozen: or those who did not fall into this error adhered to that very small list which included very little else than calomel, opium, ipecac, and quinine, and to go outside of this limit was not considered necessary, and by many was considered of doubtful propriety.

We doubt our ability to name all the remedies adopted in the past few years, but we doubt if any of them would have been widely



known to the profession had it not been for the enterprise of manufacturing chemists.

In the Southern States we can all recall cinchonidia sulphate as an unknown powder, lying in an untouched sample package on the table, waiting for some charity patient upon whom to try its virtues. But by the persevering efforts of Messrs. Powers & Weightman, it has found a place in the confidence of the majority of practitioners. Does any one believe that upon a knowledge of the chemical composition, or the analogy of action of the cinchona salts that the profession would have taken this chemical into their confidence?

In five years the enterprise of the wholesale drug manufacturer has brought into use remedies of high value, and as their efforts have been seconded by the medical press and physicians, the addition of many more may be expected.

As everybody knows, by this addition we will get many drugs of no value; but that will not be any worse than the scores of inert article still retained in the dispensaries. The push and energy of the manufacturer need not deprive the practitioner of his faculty of discrimination. When the whole field is taken up, and we have no diseases which fail to yield to our remedies then let us cease to employ the new drugs, and straightway the manufacture of the new drugs will stop.

One reason why medical men are sometimes duped by high-sounding botanical terms, is that botany is not an essential part of the course of any teaching institution in this country, and therefore not one doctor in a hundred is able to trace out the botanical affinities, (which sometimes means therapeutical affinities) of the new candidate for his favors. The old-time drilling in the "doctor shop" known a few generations ago, when every shop-boy had to prepare the medicines from the crude materials, and oftentimes collect the plants, as a part of his education, could be with advantage reëstablished now. For if the doctor is conscientious he must go through this drudgery of elementary learning after he graduates, or be at the mercy of the enticing wholesale advertiser.

Looking at the matter from our stand-point, we have no doubt that the enterprise of the manufacturing pharmacist has added greatly to our ability to treat our patients, and the question whether we shall lead them, or they shall lead us depends entirely upon our education.

## REVIEWS AND BOOK NOTICES.

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PHOTOGRAPHIC ILLUSTRATIONS OF SKIN DISEASES. By GEORGE HENRY FOX, A. M., M. D. Parts 5 and 6. Forty-eight colored plates taken from life. Price \$2.00 a part. Complete in 12 parts.

As Dr. Fox's work progresses it is evident that all the encomiums bestowed upon it by his brother specialists are well deserved. It will occur to every one who has become familiar with the illustrations in other works on skin diseases, that these copies from nature lack the bright coloring which the lithographer's art has given to the former. But in this exists the excellence of Dr. Fox's illustrations, that they are autotype copies of actual cases, truthfully colored, and rendered permanent by an improved photographic method.

Part 5 gives five figures of eczema, with a history of each case, besides the descriptive text.

We quote what the author has to say about the treatment of eczema, for the benefit of those who have not yet supplied themselves with the work.

"The success of local treatment in eczema depends upon its adaptation to the case in hand. Innumerable are the remedies which have been recommended, but without a knowledge of the principles which govern its use, no remedy can be of much service.

"I will venture to assert, that so far as local applications are concerned, the great majority of cases of eczema can be successfully treated with two simple ones, which are always on hand, or very easily obtained, viz. : sweet oil and soft soap. Of course I do not advise the reader to use these, since there are emollient applications superior to the former, and stimulating remedies which may advantageously supplant the latter, but I hold that it is far better to know how and when to use even the two remedies mentioned, which typify two opposite modes of treatment, than to have a well stocked drug store at command, and to use its contents without definite purpose. What will oil or an emollient ointment accomplish in the treatment of eczema? It will soften and remove any crusts which may be present, it will soothe the inflamed parts and alleviate itching, and it will protect the denuded corium from the

desiccating influences of the air and the irritating action of water, and thus allow the growth of a new and healthy epidermis. What will soap accomplish in the treatment of eczema? It will free the surface of the skin from a mass of dead epidermis, it will give exit to confined serum, it will stimulate the circulation of blood in the diseased skin, and thereby promote the absorption of the infiltrated products of inflammation. \* \* \* In fact, as quinine in the treatment of malaria, so is *sapo viridis*, or ordinary soft soap, in the treatment of chronic eczema."

In Part 6, three varieties of eczema are treated and also *Ulcus varicosum* and *Psoriasis annulata*.

Dr. Fox speaks in deservedly high terms of Martin's rubber bandage in varicose ulcer. "It not only supports the dilated veins and thus tends to remove a cause of the eruption, but by its local action it macerates the epidermis, and facilitates the escape of serum confined in the skin and subcutaneous tissue. By its elasticity it exerts a constant pressure on the leg, and induces a rapid absorption of the products of inflammation." We are glad to see the specialist speak so heartily of an appliance that is fast winning its way into general practice.

We heartily recommend to our readers to become subscribers to this meritorious serial.

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#### TRANSACTIONS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION.

At the Twelfth Annual Session. Held at Aberdeen, April 1st, 2d, and 3d, with the Roll of Members and Reports on Medical Topics. Published by the Association. Jackson, Miss.: Clarion Steam Printing Establishment. 1879. Pp. 209.

This volume is largely taken up with the memorial services in honor of the heroes who died with yellow fever during the great epidemic of 1818.

The memorial address is by the Rev. Dr. B. M. Palmer, of New Orleans, which is followed by two poems, one from the pen of Dr. J. Dickson Bruns, and the other by Major S. A. Jonas. The memorial oration is by Dr. John Brownrigg. The report on Necrology embraces a list of 57 names, but among them we do not see the name of Dr. C. Happoldt, of Morganton, N. C., reported to have died of yellow fever at Vicksburg. The memorial proceedings are touching tributes to the dead, and worthy of the sad occasion.

The medical reports are on various subjects: "The Spas of Mississippi" and "Helenium Tenifolium," by Dr. D. L. Phares; "Surgical Diseases of the Rectum," by Dr. M. S. Craft; "Malarial Fevers," by Dr. N. L. Guice; "Intentional Anæsthesia," by Dr. J. M. Taylor; "Ligation of the Femoral Artery," by Dr. E. P. Sale; "Use of the Obstetric Forceps," by Dr. S. V. D. Hill; "Climato-therapy of Phthisis Palmonalis," by Dr. John Brownrigg; "New Remedies," by Dr. B. A. Vaughan; "Report of a Case of Meningitis," by Dr. A. G. Smythe; "Diagnosis and Treatment of Yellow Fever," by Dr. W. F. Hyer; "Wound of the Knee-Joint," by Dr. S. V. D. Hill.

The paper by Dr. J. M. Taylor, on "Intentional Anæsthesia," was followed by a resolution adopted by the Society to the following effect: That in the opinion of this Association, the evidence adduced by Dr. Marion Sims as set forth in the paper of Dr. J. M. Taylor, is conclusive that Dr. Long, of Georgia, was the original discoverer of the anæsthetic use of ether in surgery.

Fortunately resolutions of societies do not settle this matter of priority.

Dr. Brownrigg's article on climato-therapy of consumption commences with a comparison of Asheville, N. C., Aitken, S. C., and Palatka, Fla. He advises that the consumptive should go to Florida or Aitken, S. C., first. If malarial fever should assail him and his disease has not advanced beyond the first stage, go to Asheville or Sewance. The proof reader had a hard time getting Dr. Gleitsmann's name right. He gets it Glutsmann and Glustmanus, showing that he has never heard of the able conductor of the deservedly famed sanitarium at Asheville.

The Mississippi Society although small as compared with some Southern States is a working body, and will not fail by holding steadily on its worthy course, to enlist the body of the profession in the objects of the organization.

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ANNUAL REPORT OF THE SUPERVISING SURGEON-GENERAL OF THE MARINE HOSPITAL SERVICE OF THE UNITED STATES. For the Fiscal years 1878-79. Pp. 176. Government Printing Office. 1879.

We have called the attention of our readers before to the efficiency and economy of the Marine Hospital Service. The business of this

Bureau is done just as carefully as a thrifty merchant would manage his own affairs. The jurisdiction of Surgeon-General Hamilton's extends over a large area of territory, and in 1879 about 21,000 sick-seamen were relieved.

A comparison of the improved economy of this service, will be seen in the following figures :

In 1870, prior to reorganization there were 74 places at which relief was furnished to seamen, 10,560 seamen were furnished relief which includes everything necessary to their maintenance. The rate per capita was \$38.41. After reorganization in 1879 the number of relief stations was increased to 210. The number of sick and disabled seamen receiving relief was 20,922, and the cost per capita \$17.93. That is to say the number of relief stations was nearly tripled in 10 years, the number of sailors relieved nearly doubled, and the expense per capita of maintenance reduced to less than one half—from \$38.40 to \$17.93.

In the sketch of the service at Boston covering a period of twenty years, there are some thoughtful observations in the "shore habits" of sailors which deserve the early consideration of the municipal authorities of maritime ports. He shows that sailors arriving in port from long voyages are beset by "runners" who fasten on to them and lure them on to that round of dissipation which has been proverbial. When his money is exhausted, if his dissipation has so disabled him as to render him unfit to ship, the sailor is sent to the hospital, and when he is a convalescent again becomes an inmate of a sailor boarding house until he has boarded out his "advanced money." Dr. Hamilton suggests that a thorough physical examination of sailors before being accepted on board of ship, will "greatly increase the number of applicants for the position of seamen by the certainty they would have of being thrown among some men." Nothing but *compulsory* preëxamination will accomplish this much desired end, for in a period of twelve months not a single application has been made in the port of Wilmington for the examination of sailors for physical capacity by masters of vessels.

It is hoped that Congress will make such a law, and that municipal corporations will require their health officers to examine abandoned women monthly.

Municipal authorities of many cities are to blame for allowing

the existence of brothels along the lines of wharves. It is a shameful blight on one city not far from us, and is damaging the facilities of commerce yearly. The crime which is abetted and the disease which is spread by these dance-houses and sailor's-dens, cannot be too highly estimated, and these places cannot be too promptly closed.

If they break out in other parts of the city they should be followed up by the sharp eye of the police, until they find no resting place. Wilmington is provided with a noble home of refuge for sailors, which is protected by legislative enactment against demoralizing practices within its walls; has a chapel attached with a minister in regular attendance, but with all this the infamous houses flourish, and the Seaman's Home is neglected. A sharp vigorous execution of police regulations would turn the balance, and Wilmington would have done her share in so far bettering her own commercial interests.

But to return to our report.

A critical examination of this report will show that energy and young life pervades this service.

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A MANUAL OF THE PRACTICE OF SURGERY. By W. FAIRLEE CLARKE, M. A., M. B., (Oxon) F. R. C. S. Pp. 320. New York: William Wood & Co., 27 Great Jones St. 1879.

This is the December volume of Messrs. Wm. Wood & Co., Library of Standard Medical Authors, completing as much, and even more, than the publishers promised.

The American editor has been modest enough not to give his name, but really he has been the making of the volume. He has added the anti-septic treatment of wounds, the use of the elastic bandage, the application of the plaster-of-Paris jacket, Buck's (really Buck's name is improperly used here) apparatus for fracture, the new method for fractured clavicle, for morbus coxarius and talipes, notes on cancer, the treatment of wounds, Heaton's radical treatment of hernia, Bigelow's litholopaxy, tracheotomy without tubes, and an entirely new chapter on transfusion.

It would be unfair to compare this volume with other manuals of surgery of recent date. It will be found a useful hand-book, and the subscriber must be hard to please who does not consider that his dollar has been well spent.



ANNOUNCEMENT! A Practical Treatise on Nervous Exhaustion (Neurasthenia), Its Symptoms, Nature, Sequences and Treatment. By GEORGE M. BEARD, A. M., M. D. New York.

We are informed by the publishers, Messrs. Wm. Wood & Co., that this book is now in press, and will be published in February of the present year.

The treatise is one on which Dr. Beard has been specially engaged for a number of years, and it will be devoted mainly to his original observations and researches on this important and growing subject.

It is designed to make the work at once condensed and practical, and to adapt it to meet the wants of the practitioner and inquirer in a department of the Nervous System that up to the present time has received very little attention from scientific men.

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*The Pancreatic Ferment.*—Dr. Wm. Roberts, in an article upon the digestive ferments describes a way of administering the pancreatic ferment so that it will act effectively. Pancreatic preparations are more powerful than those of pepsin, and digest with great energy, starch, albuminoids, and fat. Unfortunately, however, they act in alkaline media, and the acid gastric juice neutralizes and digests them before they can reach the intestine. In order to prevent this, Dr. Roberts gives the preparation two or three hours after each meal, guarding it with an alkali. As the gastric digestion is nearly at a close at this time, the pancreatic ferment is supposed to be carried safely through the stomach. Dr. Fothergill, who describes this plan in the *Philadelphia Med. Times*, is full of admiration for its great ingenuity, and of praise for the prospective benefits it will secure. We do not share the raptures. It remains to be proved that the trypsin gets safely through the stomach, and that its alkaline body-guard will not excite enough gastric secretion to destroy it. Further, intestinal indigestion is comparatively rare; and in dyspeptics the worst distress is in the hours directly after eating. A medicine not given until the pains are over cannot become very popular. But the theory is a beautiful one, and evidently has fascinations to the scientific therapist which the lively imagination of Dr. Fothergill could not resist.—*Medical Record*.

## MICHIGAN SANITARY CONVENTION.

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The Sanitary Convention held under the auspices of the Michigan State Board of Health on the 8th and 9th January was one of unusual interest, and was the first of the kind ever held in the country.

A feature of the Convention was the exhibition of articles and sanitary appliances. There was no fee of admission or premium offered for competition. But the design was to encourage the exhibition of apparatus, etc., to bring it more prominently to public attention. This being the first exhibition in this country, the number of articles exhibited was not large, but there was nevertheless a very good and interesting showing.

Prof. R. C. Kedzie, of the Michigan Agricultural College delivered the address of welcome, and Dr. Wm. Brodie, of Detroit, (editor of the *Therapeutic Gazette*) presided over the meeting. Dr. Brodie's address was excellent, and reviewed the scope of a sanitarian's work in a comprehensive manner, suited to the appreciation of a mixed audience. "Reform," he said, "is a tree of slow growth, and it is not until stern necessity manifests itself by unmistakable signs, that the admonition is heeded. The field is large and the reapers are as yet few. To augment the number of reapers is one of the objects of this convention." Dr. Brodie defended vaccination in a most vigorous way. He thought that a supply of bovine virus should be furnished free, or at cost, as this source of supply of virus met the opposition of the anti-vaccinationists in the proper way, their objection being chiefly to the risk of the inoculation of diseases through the medium of humanized vaccine.

A paper was read by Alexander J. Murray, V. S., of Detroit, on "Contagious Diseases Among Cattle." The history of the disease was reviewed and also its pathological anatomy. Dr. Murray could not give any satisfactory practical test whereby diseased meat could be recognized. All he could say was that it had a dark blood-stained appearance, and decomposes very rapidly.

Dr. J. S. Caulkins presented a paper on "Methods of Study in Sanitary Science." He said:

"Diseases might be classed as non-infectious, infectious and doubtful. In the first class he must study the simpler causes before we can successfully treat the complex forms of disease. We are all animals, and the same causes which affect the lower

forms of animal life affect us. The entire animal kingdom must be studied therefore. In the second class, the infectious diseases, we must have statistics before we understandingly treat them. The various questions as to how long the virus of infection remains potent, and it is disseminated, etc., must all be taken into consideration. Peddlers, old paper money, musty books, etc., were suspected of conveying the poison of diphtheria and scarlet fever. The extent to which all these causes act is a proper subject for the investigation of the sanitarian. In the third class of diseases, which by some are considered infectious and by others not, we find the most difficult problem."

Dr. J. C. Lundy read a paper on "Light in Public Schools," discussing it in its relation to near-sightedness.

Dr. H. F. Lyster, of Detroit, read a paper on the "Prevention of Pulmonary Consumption," of which the following is an abstract :

It will hardly be expected that in a paper presented at this convention the various theories entertained regarding the pathology of this disease will be entered into at any length, or that the minute anatomy or finer subdivisions will be discussed. We will then accept the fact simply that pulmonary consumption is a disease characterized by wasting of the body, accompanied by a cough and expectoration, and in a large proportion of cases progressing to a fatal termination, an examination after death showing evidences in the lungs of changes resulting from inflammatory processes. In a convention of the character of this one can there be a subject presented for discussion of greater interest than the prevention or limitation of that disease, which, by its almost universal prevalence, results in an estimated mortality of from 10 to 30 per cent. of deaths from all causes?

Dr. Lyster treated at considerable length the various forms and stages of pulmonary disease. One he described as follows :

How frequently do we find the tendency to this disease betrayed by that dash of struma which gives to woman a type of beauty little less than angelic. Are these not written upon the memories and engraved upon the hearts of many of us—the image pure and chaste of her who long years ago faded away like the flower? The liquid eyes, the long eye-lashes, the pencilled brows, the fine hair and the delicately fair skin, the flush upon the cheek, too brilliant to have been painted by the health-giving pencils of the sun; the chiseled features and semi-transparent hands, all have been parts of the earthly tabernacle of a mind characterized by such spiritual graces that its separation from the frail tenement came with that gentleness which marks the earliest rays of the morning as they penetrate the lingering shadows of the night and leaves us only the memory of what has been.

The speaker said he regarded consumption as to some degree contagious. Concerning the prevention of the disease he said :

First of all, the fact of hereditary transmission: The children of consumptive parents are the great company from which the vast majority of consumptives come. They inherit the seeds of the disease, and only wait the advent of the exciting causes for the germination and full development of the destroyer. These causes are met with on every hand—cold, exposure, privation, overwork, mental or physical, depressing influences of every kind, the ordinary diseases of childhood, lack of proper food, clothing, etc., unfitting occupation or employment. The logical inference is clear. There should be as a primary step toward the limitation of consumption, no intermarriage between or with consumptives. Could this well-known and admitted fact be carried out, the most effective means for the limitation of this disease would have been taken. Such a desideratum, however devoutly to be wished, can only be approximately attained, and that by opening the eyes of the people by the general diffusion of knowledge upon the subject. Let this great law of nature be infringed by those aware of its existence, let it be a sin of commission rather than omission,

let the circumstances which determine marriage, affection, interest, propinquity, be tempered with a knowledge of its entailments, and much will be done in the direction of limiting these alliances and their inevitable consequences, scrofula and pulmonary phthisis.

\* \* \* \* \*

According to the vital statistics of Michigan, the per centum of deaths from consumption to all deaths was in 1871, 13.99; in 1872, 10.97; in 1878, 10.15. Many years since the idea that malarial fevers were not only preventive but curative of consumption obtained a very general credence, and while it was not so fully concurred in by the medical profession in recent years, it was not disproved until the researches of Dr. Bowditch upon the connection of phthisis with damp soils refuted the theory of the ague cure.

With our present knowledge of the effects of climate upon this disease, while much may be done by the medical adviser in directing patients in the earlier stages of pulmonary consumption to climates which might act favorably in retarding, or it may be in curing the disease, what words of condemnation are too strong, what censure too severe, for the physician who, to relieve himself of responsibility, or desirous of pleasing the patient and his friends, recommends a change of climate and sends away the poor consumptive in the advanced stages of disease to die among strangers in a strange land?

“Sanitary Rewards and Punishments” is the caption of a paper read by the Hon. Henry W. Lord, of Detroit.

This paper has a peculiar interest, being the views of a non-medical man, who disclaims any scientific acquirement, but who is imbued with the true interests involved in sanitary matters.

The vast amount of work done in the few days this body was together speaks well for the degree of sanitary education which has been attained in Michigan, and no doubt its success is due in no small degree to the admirable work done by the State Board of Health in these few years of its existence. We congratulate Dr. Baker, the Secretary of the State Board, that he is reaping some of the fruit of his unremitting labor.



In the “Weekly Summary of Mortality,” in the National Board of Health *Bulletin* of the 24th of January: “No marked change is noted \* \* \* except the increased prevalence of *small-pox*, which has this week caused three deaths in the District of Columbia and one in Philadelphia. The newspaper reports of *small-pox* in Baltimore last week have not been confirmed by any official report, but the correspondents of the *Bulletin* announce the appearance of the disease at Worcester, Mass., and at various points in New York and in the Western States.

## NEW MEDICINAL AGENTS.

*Camphor-Chloral in Toxic and Therapeutic Doses.*—Dr. B. B. Simmons, reports a case in which two drachms of camphor-chloral were swallowed, (*American Journal Med. Sciences*, Jan., 1880), the following symptoms ensuing: The patient began to suffer from an intense heat and burning in the throat and stomach. When medical assistance came the patient was found with cold and flaccid extremities, pulse slow and feeble. An emetic was given immediately, relieving the stomach of a portion of its contents, with some of the medicine. Free salivation and excessive discharge of mucus from the nose set in most immediately, and continued for some days. From eight to ten coffee-ground looking stools, mixed with mucus, were passed during twenty-four hours, but were reduced to half that number on the day following. At the end of thirty-six hours the skin had become quite warm, and the respiration though a little slower than normal was otherwise easy and regular. The condition of the patient was that of a *prolonged narcotism*, from which she could be partially aroused only, so as to take water, liquid nourishment and medicine, which she swallowed readily, probably because of the parched condition of her mouth.

Occasionally she would mutter incoherent sentences, half in delirium, half in expression of her wants.

This continued for four days, when she awoke as from a disease, asked "What had been the matter?" and then sunk back into her former condition. After the lapse of ten days she recovered the use of her extremities and was able to walk around the room. Little was done in the way of medication.

Dr. Simmons was led from this observation of the effects of camphor chloral to employ it in a case of periodical mania. Thirty-five drops of the drug given during an afternoon succeeded in quieting the patient after chloral, morphia, hyoseyamia, etc., had failed.

*Subcarbonate of Iron as an Antidote in Arsenical Poisoning.*—Dr. Charles A. Leale, of New York, gives in *Am. Journal Medical Sciences*, four cases illustrating the value of iron subcarbonate as an antidote for arsenic.

One case he relates was that of veterinary surgeon who took while on a drunken spree, one ounce by troy weight of arsenious acid, and then went to bed to die, but

in less than ten minutes the intense pain brought fear of death and remorse of conscience. He endeavored to vomit but failed to accomplish his object and sent for Dr. Leale. He first washed out his stomach by copious drinks of warm oat-meal water, then gave two ounces of powdered subcarbonate of iron mixed with a pint of water, followed by the frequent administration of ice to prevent further vomiting. The violent pain of the stomach and bowels lasted for twenty-four hours. After the iron had supposedly done its work, it was removed from the alimentary canal by castor oil. After a sharp attack of gastro-enteritis he recovered.

From the study of the four cases enumerated, in each of which large poisonous doses of arsenic were taken and recovery followed, together with a number of lesser magnitude, Dr. Leale advises (1) Quickly remove as much as possible of the poison from the stomach by non-irritating substances. [Apomorphia hypodermically in one-tenth grain doses is the very thing!] 2. As an antidote give two ounces of the powdered subcarbonate of iron, or common iron rust in fine powder mixed with sufficient water to allow it to come in contact with the entire mucous membrane of the stomach, thereby to have the iron either absorb or surround by its mechanical affinities all traces of the arsenic poisoning. In three or four hours, give a free dose of castor oil, which will prevent the impaction of iron in the intestinal canal. Apply artificial heat by means of hot fermentation to the abdomen, and by friction promote capillary circulation. Relieve the pain by morphia. Avoid all irritating foods, and give emollient drinks until recovery follows.

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*Salicylates of Calcium and Bismuth.*—Dr. Walter Kilner, (St. Thomas Hospital Reports, 1879) gives a paper upon the action of salicylates of calcium and bismuth in the diarrhoea of children. During a late epidemic of variola he administered salicylic acid to lower temperature of the patient, and he found that in each instance a copious perspiration followed. Arguing from this that a drug which would induce perspiration under adverse circumstances, and that a necessary accompaniment of perspiration is a determination of blood to the skin, also that for the production of diarrhoea there must be an infiltration of fluid into the intestines, which can only occur when these organs are hyperæmic, he thought that one feature of the disease would be removed if the excess of blood in the intestines could be distributed to the parts of the body. For this purpose the acid in question seemed to promise the greatest success. Besides, he thought that as a sedative it would be likely



to prove beneficial by relieving discomfort and pain; and in assisting in curing the disorder, it would be advantageous to combine it with bismuth and calcium. The salts of salicylic acid are bland and sweet having no irritating effect upon the throat during the swallowing of the medicine—a fact not to be despised if children are to take their physic regularly. Another reason for the administration of the salicylates is their disinfecting properties, which according to some experimenters are superior to carbolic acid or bicarbonate of potassium.

One of the most successful set of cases was when the diarrhœa seemed to be entirely dependent upon the heat of the weather, or, during the autumn, upon the change from the cold nights to the hot days—at least, when no other cause for it could be discovered. It seems not improbable in these cases that the diarrhœa is an effort of nature to reduce the temperature of the body, the sweat glands being either incompetent or else not sufficiently active to perform the extra duty suddenly required of them. Here the salicylates not merely check the diarrhœa, but also cool the body by their influence on the sweat glands, assisted by the direct cooling action of the air upon the larger quantity of blood impelled through the cutaneous capillaries, and, in addition, the stimulation of the glands does not terminate with the leaving off of the medicine, thus enabling the child to become accustomed to the hot weather.

Another class of cases in which these drugs are useful, is when the diarrhœa occurs either subsequent to, or cotemporary with, the gastric catarrh of infants, whether arising from improper food or from dentition: also a certain amount of benefit may be expected when the stools are fetid. In all these instances there are most likely decomposing or fermenting substances in the alimentary canal, accompanied by flatulence and discomfort, if not pain. By the arrest of the decomposition the local irritation caused by the offending material is removed, which may assist in controlling peristaltic action of, and the secretion into, the bowels, or even should the flux remain, the condition of the patient is improved.

Diarrhœa due to dentition we rarely find relieved by the salicylates, as they do not exert any influence upon the fifth nerve. Another contradiction is when the food is passed through the alimentary canal so quickly as to be quite or nearly undigested. To obtain

full benefit from these salts they must be given in good size doses, for although the small doses will remove the fœtor, yet the number and quantity of the evacuations will not be diminished by them.

The best doses of these drugs are two or three grains for a child under six months, and from three to five, or more, when above that age. The bismuth salt is preferable when there is much vomiting otherwise the calcium salt will be equally beneficial.

The following prescriptions contain five grain doses of the salicylates :

R.

Acid salicylic, gr. xxxv.

Cretæ precip, gr. v.

Syrupi, ʒ ij.

Aqua ad, ʒ ij. II. Mist.

Two tablespoonfuls to be taken every four hours.

R.

Acidi salicylic, gr. xxvii.

Bismuth teroxid., gr. xiv.

Tinc. hyosciam, ʒi.

Syrupi, ʒ ij.

Aqua ad, ʒ ij. II. Mist.

Two teaspoonful to be taken every two hours.

The few cases given in detail, which follow, shows good success with the remedy.

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*The Dose of Elaterium and Elaterin.*—Elaterium has of late years greatly deteriorated in activity, most of that in the market requiring to be given in double the dose (and even in still larger amounts) than used to be the case formerly. We have ourselves made inquiries, both in England, on the Continent, and in Malta, as to the best sources of first class elaterium, but the samples which came under our observation were not at all satisfactory. Occasionally a very good lot makes its appearance, and this is almost a disadvantage at present, and because many physicians have acquired the habit of prescribing quite large doses of elaterium, and, if by mere chance the sample happens to be a very good one, the results are unexpectedly severe. Clutterbuck's elaterium used to be very good and uniform, and its average dose was usually stated at  $\frac{1}{8}$  grain. But

there is no such thing now as "Clutterbuck's" elaterium : for the British firm which claims to use his process does not succeed in obtaining as satisfactory a product. Prof. Flückiger states that elaterium, carefully prepared by Allen & Hanburys, of London, contained 33.6 per cent. of elaterin ; the best Maltese variety contained 27.6 per cent. But these figures are unusually high, and do not represent the average samples in the market. Hager (*Pharm. Trav.*, I., 1014) says of White, or English Elaterium : " Under this name, about 50 years ago, the sun-dried sediment deposited from the juice and sap of the elaterium fruit was introduced into the market, either in form of amorphous, light, greenish-white pieces, of a granular fracture, or in form of curved concavo-convex pieces, about 2 mm. thick. It was found to be of varying effect, and was afterwards neglected" [on the Continent.] He further describes the following :

"*Extractum Elaterii*; Elaterium nigrum; Elaterium." The fresh fruits are bruised, and the expressed juice, after straining through a hair-seive, is evaporated on a water-bath to a thick extract. The yield is about 1.5 per cent. This is in form of a greenish-brown, very bitter extract, turbidly soluble in water. It contains 15 to 20 per cent. elaterin."

The adult dose of *elaterium* (such as we are in the habit of using at the present day) is about  $\frac{1}{4}$  grain. This is the average full dose, when the full effect is desired. Every fresh lot of elaterium should be tested by itself, and in the beginning the dose should be somewhat smaller. But we have seen 1 and even 2 and 3 grains of some lots produce scarcely any effects.

The adult dose of *elaterin* is about 1-12th grain ; less will often answer, and the dose should be increased with caution.

The concluding words of the article "Elaterium" in the *National Dispensatory* are apt to lead to mistakes. Stillé who first speaks of the dose of elaterium, recommends to begin with 1-16th grain. At the end he says : " Elaterin is more active in solution with alcohol. *The dose is the same as that of elaterium.*" We differ from him in this. If this refers to the dose given for elaterium (1-16th gr.), it is right enough. But persons who consult the work, often merely glance at the place where the dose of a substance is mentioned, without reading the whole article. Hence, it may happen that

somebody, accustomed to large doses of elaterium, will give equally large doses of elaterin. We think that the wording of the passage in question should be altered.

By the way it may be added that elaterin is *inert* if administered endernically or hypodermically.—*New Remedies*.

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*Phytolacco Decandra*.—The root, leaves, and berries of *phytolacca decandra* L. are used in medicine. In Europe the technical appellations are : Radix Herba or Folia, and Baccæ Phytolaccae, or—Solani racemosi, or—Solani Americani. All these have a rather sharp taste and act as violent purgatives and emetics, for which reason they are used internally to produce emesis, or in rheumatism and dropsy, and externally as irritants and even caustic in malignant sores, either applied alone or in combination with other substances. The root and seeds are used, like mustard, for preparing “sina-pisms.” The leaves and unripe fruits are used externally against eczema, cancer and callous tumors, and internally in syphilis. The fine red juice of the ripe berries is used in France for coloring wines, and is a common coloring matter used by European confectioners. The young shoots lose, by cooking, all traces of acidity, and are considered in some sections of the country as a very savory vegetable.—*New Remedies*.

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*Carbolic Spray does not Prevent Putrefaction*.—Dr. Lewis A. Stimson communicates to the *American Journal of Medical Sciences* the result of his experiments with carbolic spray in the prevention of putrefaction says, the conclusion seems to be unavoidable that carbolic acid spray does not destroy the vitality of putrefactive germs floating in the air.

“No one will deny,” he says, “that carbolic acid has an effect upon raw tissues; the change of color and the copious secretion that follow its application to a wound have been observed by all; but if this effect is desired, it can be obtained without the aid of the spray by simply washing the wound with a strong solution: or, if it must be applied in the form of a spray, a small hand apparatus directed solely upon the wound may be advantageously substituted for the steam atomizer and its volume of mist.

*Infusion of the Stem of the Sunflower as a Remedy in Intermittent Fever.*—P. Filatow, of Ssaransk (Gouvernement : Pensa ; Russia) has for three years frequently used an infusion of the sunflower (*Helianthus annuus* L.) in intermittent fever, and has, in the majority of cases, obtained as good results as could have been obtained from quinine. The infusion is prepared by cutting the stem of the sunflower (fresh or dry) into small pieces, and macerating it for 3 or 4 days with common cognac, when it acquires the color of sherry, and the distinctive taste of the drug. The dose for adults is a tablespoonful 3 times a day, and it may be administered before or during the paroxysm. In recent cases recovery took place already after 1 to 3 days ; in more chronic cases, the medicine had to be given for one week, and occasionally even longer. Only a few cases resisted the remedy entirely, and quinine had to be resorted to ; but in several instances even the latter failed to effect a cure.—*St. Petersb. Med. Wochensch. and Pharm. Z. f. Russl.—New Remedies.*

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*Precaution in Administering Iron.*—Dr. T. Grainger Stewart has discovered that when, during the administration of the tincture of chloride of iron, functional derangements of the stomach and liver arise, with furred tongue, impaired appetite, headache, etc., these symptoms rapidly disappear upon adding one-half grain of the chloride of ammonium to each minim of the tincture. He finds this combination notably useful in cases of heart disease accompanied by anæmia and debility.—*New Remedies.*

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*Uranium in California.*—A dispatch from Fairplay reports the discovery of uranium in the Sacramento mining district. This mineral is found in Bohemia, but has never before been discovered in this country, as far as known. The present discovery was made by H. L. Rice. The ore runs 60 per cent. Uranium is worth \$1,000 per ton. One of the principal uses is as a coloring substance in the manufacture of glass.—*Scient. Amer.—New Remedies.*

## CURRENT LITERATURE.

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### DIAGNOSIS OF TOBACCO AMBLYOPIA.

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Due consideration has not been given to this subject in England, and Mr. Edward Nettleship, Ophthalmic Surgeon to St. Thomas' Hospital, (Vol. 9, 1879) makes this contribution.

The symptoms in tobacco amblyopia all depend on the fact that in this amblyopia, the central region of the visual field is the part first affected, and remains throughout, the seat of the greatest relative defect, and, further, that the periphery of the visual field remains of full size.

1. However much acuteness of central vision may be lowered, the patients show no difficulty or awkwardness in walking about, and have not the "amaurotic aspect" so common in the subjects of progressive atrophy of the nerves, in whom the peripheral contraction of the field is an early event, and may lead to difficulty in avoiding obstacles, and to the other inconveniences which arise from loss of indirect sight, before central vision is much affected.

2. The sight in tobacco amblyopia is nearly always best in a rather dull light, the complaint being very much the same as in early uncomplicated nuclear cataract. The patients when asked whether the sight is always bad alike, generally say that it is better the first thing in the morning and again towards evening, that it is better on dull days, and that in direct sunlight it is very bad.

3. The state of the visual field. In tobacco amblyopia the greatest functional defect is always found to occupy an oblong or oval patch, which extends from the fixing point (corresponding to the yellow spot) out towards and often beyond, the blind spot corresponding to the disc.) This patch ("central scotoma" of authors) is only defective (amblyopic), never blind (amaurotic); it is a "relative," not an "absolute" scotoma. Indeed, it is so relative that patients do not often make complaints that would lead us to suspect its existence, whereas, in the absolute scotoma caused, *e. g.*, by a large hæmorrhage at the yellow spot, the symptoms are usually very suggestive of the state. Still, in many tobacco cases we notice that the patient in attempting to read, moves the print about as if trying to find some position in which it is better seen;



this symptom is best seen in early and slight cases, when print of moderate size (say 10 J.) can still be read, and the patient, not having got accustomed to the defect, is constantly trying to see smaller print.

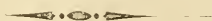
The scotoma of tobacco amblyopia is invariably symmetrical in the two eyes, indicating affection of parts of the retinae or nerves which correspond anatomically, but are not physiologically identical; a fact which is strongly due to a change in the orbital part of the optic nerves, and not to any cerebral or central lesions; and it is conjectured that the change may chiefly occur in the fibres at the periphery of the nerve, which are believed to supply the central part of the retinae.

It is not pretended that accurate measurement of the field of vision is commonly necessary, except to emphasize the value of some of the more easily appreciable symptoms which have been mentioned, and which although characteristic enough, may be overlooked and sought for. These are, besides the improvement of vision in dull sight, the history of equally symmetrical failure of sight without other ocular symptoms, and without cerebral or spinal symptoms, excepting often nervousness and tremulousness; the presence in many cases of some degree of color-blindness for green and red, and sometimes for yellow, much more noticeable if the colored objects be small spots, and frequently passing undetected if large masses of color be used for testing; the failure of vision, generally gradual, but occasionally rapid or at any rate noticed suddenly; the pupils natural in size and activity, or at most rather sluggish and somewhat too large. If it be added that there are no signs of chronic glaucoma, nor of incipient cataract, that the ophthalmoscopic changes are very slight in comparison with the defect in sight, being limited in most cases to (1) congestion and (2) more or less pallor of the optic disc alone, and the spectacles suitable for patient's age and refraction do not bring sight up to the normal, we shall see that the diagnosis of this disease usually presents no difficulties, and that it might often indeed be made even without ophthalmoscopic examination.

Affections of sight capable of being easily confused with those which form the subject of this paper may be sought for in vain among the non-smokers. It is no doubt rare to see the disease in

smokers who are water-drinkers, and very common to see it in those who have damaged their stomach and their nervous system by drink. But the more we study this disease, the stronger does the evidence seem that without tobacco this common characteristic form of amblyopia would be almost unknown. In respect to treatment, it is before all things essential to believe in the advice we give; general directions to "smoke less and drink less" are, as a rule, useless. Complete permanent abstinence from tobacco must be insisted on, for though something short of this would, as many cases show, often be enough, it is quite unsafe to give any discretion to the patient in respect to so insidious a habit.

Many cases with diagrams of scotoma are given.



#### EXCISION OF HEAD OF THE FEMUR SUCCESSFULLY PERFORMED FOR UNREDUCED THYROID DISLOCA- TION OF THE FEMUR.

A young sailor, aged 19, was admitted to St. Thomas' Hospital under the care of Mr. William MacCormac, with thyroid dislocation of the femur. He had been previously, though unsuccessfully treated, in the first instance to reduce the dislocation. The patient presented the following appearance: There was marked abduction and eversion, with an excessive amount of flexion of the joint superadded. The limb was greatly wasted, and appeared shortened, but exact measurements of length were scarcely possible, the trochanter tip was half an inch below the level of Nelaton's line, five inches from the anterior superior spine on the side dislocated, and six inches distant from it on the sound side. The patient could only stand with extreme difficulty, and with aid of the crutch. In the erect position his back is in a state of extreme lordosis, the thigh flexed and advanced, so that the pelvis was much tilted, and the body dipped towards the affected side.

Mr. MacCormac made a **Y** shaped incision, one branch being directed towards the anterior superior spine, the other towards the posterior superior spine of the ilium, while the stem of the **Y** ran

down the trochanter. He found the acetabulum as a joint surface practically obliterated. So numerous were the adhesions and so deeply were the head and neck situated, that it would have been a matter of great difficulty to replace the head, did not the cardinal difficulty of there being no acetabulum stop the attempt. The bone was chiseled off above the level of the lesser trochanter, and, after a somewhat troublesome dissection, removed the head, neck, and great trochanter.

The patient eventually recovered, being able to walk well, having only three inches of shortening. The patient can lie supine on a table without a trace of lordosis and the hip joint can be flexed to an angle of 45 degrees without pelvic motion. The knee movements are now perfect and the limb has greatly increased in size and strength.—*St. Thomas' Hospital Reports*, 1879.

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#### MARTIN'S RUBBER BANDAGES.

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We find an English account of Martin's bandage in *St. Thomas' Hospital Reports*, by H. H. Clutton, M. B., F. R. C. S., which awards due credit to Dr. Martin. He says: "We certainly owe a great debt of gratitude to Dr. Martin for his valuable suggestion, for few improvements have made such a radical change in the outpatient room as this. The principle is, of course, old, but the *best* application of that principle is quite new. For all this we are indebted to Dr. Martin."

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*Depression of the Skull of Infants.*—Dr. Liddell quotes from Dr. Paul F. Eve's "Remarkable Cases in Surgery": "I have heard of no less than three cases of depressed skulls in young children relieved by exhausting the air from a cupping glass, placed over the portion of the cranium driven below the surrounding level. One instance occurred in Europe, the second is recorded by Dr. Moultrie, of St. John's, S. C., and the third was mentioned to me by my colleague, Dr. Briggs."—*Am. Jour. Med. Sciences*, Jan., 1880.

## MEMOIR OF

## Edmund Strudwick, M. D.

The death of one of the oldest and most distinguished of the medical profession in North Carolina demands a tribute, more appropriate from a professional pen than from that of a layman; and if the writer of this believed that he were anticipating such production; he would promptly have delegated to such authority the duty appropriate to the distinguished subject. But finding that there is no such purpose in others; and feeling that delay in executing it would reflect both upon the living and the dead, he assumes it, animated by a spirit of affectionate reverence; yet fully aware of deficiency growing out of differences of age, and diversity of pursuits.

That spirit of affectionate reverence is one common to the generation which grew up around the latter years of Dr. Strudwick; authorized and confirmed by the reputation handed down by the former generation, and strengthened by the deferential respect accorded by contemporaries in years and in the active business of life; and that deference unreservedly paid to personal character, always maintained in its loftiest purity; and to a professional reputation gaining in brilliancy rather than waning in lustre under the growing shadows of advancing years.

It is with regret that the writer is able to furnish so few of those personal reminiscences which are the charm of biographical memoir; and so little of those that illustrate professional fame. Relying upon a treasure which he believed laid up in the memory of contemporary associates, in social life and in professional experiences, he has to confess to a failure to a large extent in the abundance of such resources.

Dr. Edmund Strudwick was born in the county of Orange, and State of North Carolina, on the 25th day of March, 1802, at the place known as Long Meadows, four or five miles north of Hillsborough and now owned by the present sheriff of the county, Thos. H. Hughes, Esq. The Strudwick family had long been settled in the county, and were distinguished in their day, as their descend-

ants are in this, for chivalrous courage, courteous manners and high mental endowment. Wm. F. Strudwick, the father of the subject of this memoir, was distinguished for all those qualities; and though little incident of his career has come down to us, yet his political prominence, indicative of personal as well as intellectual influence, is attested by the fact that he represented this district in the Congress of the United States in the session of 1796, and was State Senator in 1797. He served three terms in the House of Commons—in 1799 with Samuel Benton as his colleague; in 1801 with James Mebane; and in 1802 with Duncan Cameron.

Mr. Wm. F. Strudwick moved to the town of Hillsborough soon after the birth of his son Edmund, residing in the house now occupied by Mr. W. F. Strayhorn as dwelling and post office.

Edmund Strudwick, at the proper age, was placed at the school of the elder Bingham, the first of the line of teachers since so distinguished; subsequently, he studied under Mr. Rogers who succeeded Mr. Bingham. It appears that he did not finish the course of instruction prescribed at this school. It is certain, that afterwards he did not avail himself of means for more liberal classical studies, so impatient was he to begin the study of the science to which nature seemed so especially to have called him, and which he pursued with undiminished ardor, literally, to the last moment of his conscious existence. Yet it is evident, that though drinking hastily, he drank deeply, from the fountain-heads of knowledge; for his ample culture and refined tastes were those of one who had laid deep the foundation of scholarship and built upon them the elegant superstructure of a cultivated intellect.

He began the study of medicine with Dr. James Webb who stood in his day in that affectionate and confidential relation to his community in after years occupied by his distinguished pupil; and after the allotted course of preparation, went to the medical schools of Philadelphia, where he graduated at the University of Pennsylvania on the 8th day of April, 1824. During his course of studies, he was classmate and office student with the subsequently eminent Dr. J. K. Mitchell, in the office of Dr. William Gibson. Not satisfied with the authority given by his diploma, but determined to turn his acquisitions to the best account in the amplest schools of practical experience, he remained in Philadelphia two

years after his graduation as a medical practitioner both in the Alms House and in the Charity Hospital; perfecting himself through the means of investigating every possible variety of case presented in a field so prolific in the phases of human ailment and suffering; and returning home to be welcomed by the confidence in a reputation which had already preceded him.

He began the practice of medicine in Hillsborough in 1826, and was soon in the possession of a lucrative business. In 1828, he was united in marriage to Ann, daughter of the Hon. Frederick Nash, with whom he lived long and happily, and whose death only preceded his by the brief period of two years.

It does not appear that Dr. Strudwick had to wait long for that period which always seems so hopelessly distant to the young practitioner. Success attended on him from the first. His industry, his faithful observance of his duties, his watchful and tender solicitude for his patients, his skill as a physician, and his consummate aptitude as a surgeon brought him into a widely extended practice, which, in time, was diffused far beyond the limits of his native county. He was sought after and sent for, not only from the most remote points in Orange county, but from the neighboring counties of Person, Caswell, Chatham, Alamance and Granville: not infrequently being called for by patients along the line of the rail road to all points, at different times, along its whole course. His was a life of continued activity, never for a moment interrupted except under the exigencies of personal suffering: never, even, in those days when the generous beams of a deserved prosperity illuminated his pathway, did he permit himself the indulgence of luxurious ease to the detriment of his duties. And this was the principle upon which he acted throughout life. Long after the frosts of three score years and ten had silvered his flowing hair and whitened his venerable beard, he might be seen every day on horseback, obedient to some demand upon his services, perhaps coming from a distance of twenty miles; to be met, on his return, it might be, by a similar call from an opposite direction; met in all cases without delay and without complaint, and without the rest and refreshment so much required at his age. It was this uncomplaining promptness, exerted too often with the knowledge that no recompense awaited him but the rewards of his own conscience, that made him



so trusted ; and it was his unhesitating obedience to professional calls, responded to without reference to social or pecuniary condition, that aided to make him so beloved.

The duties of a country physician are general in their character, embracing all those branches which are the subjects of minute and jealous subdivision in metropolitan practice. Pharmaceutist, physician and surgeon, not infrequently combined in the same individual, in country professional life are characters frequently regarded as one and inseparable. In the last two characters, the acquirement and talents of Dr. Strudwick were equally and constantly called into use ; inspiring equal confidence in both in the minds of his patients. In his capacity of physician, he was remarkable for his unwearied assiduity, his tender care, his patient sympathy and his hopeful views ; as a surgeon, he had few equals in the daring, and the success, of his operations ; a boldness justified by his profound anatomical knowledge, an exquisitely delicate and accurate manipulation. Professional readers will value this estimate of his skill when it is stated that he had performed almost all of the leading and hazardous operations in surgery with success. He is recorded to have performed the operation of lithotomy—regarded as one of the most critical of operations—twenty-eight times, to the complete relief and restoration of the patients operating also in numerous cases of strangulated hernia—twice when intussusception had taken place—in removal of tumor, once removing one weighing thirty-six pounds, one of the largest probably on record ; and in all these cases successfully.

His success as a surgeon was largely the result of his wonderful control over his nerves. An instance of this was recently recalled to the recollection of the writer. A few years ago, then an old man, he was summoned to the county of Alamance to perform a delicate and difficult operation. He reached the Company Shops by rail about nightfall, and immediately set out with a brother physician, in a buggy, for the house of the patient, some miles distant in the country. The night was dark and cold ; the road was rough ; the horse became frightened at some object, ran away, upset the buggy, and threw the occupants out, stunning one and breaking the leg of Dr. Strudwick near the knee joint. He lay helpless upon the ground until the next morning sun had risen, and was

then found in intense agony and half frozen. Yet his indomitable resolution was unshaken; and he insisted upon being carried forward to the house of his patient, and there performed the operation, (for hernia) lying upon the bed by the side of the patient. He was then brought back to Hillsborough on a hand car, and was confined to his bed for three months afterwards.

His reputation as a surgeon, coëxistent with his career, drew to him an extensive practice in all the branches of surgery. In addition to those already named, he performed innumerable amputations, operations for cataract, for cancer, and for numberless other maladies or accidents. His boldness as a surgeon has been referred to. It never degenerated into rashness but was sternly under the control of a safe caution, fortified by thorough knowledge of the case and confidence in his own judgment. His brother practitioners were often the admiring witnesses of his powers; and in cases that seemed to defy human skill, saw him triumphantly release himself from difficulty by what seemed to be an unerring but incomprehensible instinct. He was a wonderful manipulator, and used the knife with either hand indifferently, with equal delicacy of touch and steadiness of nerve.

As an obstetrician, his fame was very great, and no provincial physician has ever surpassed him in this branch of the profession.

The profession, to which he had devoted himself, and to which he did devote himself through life with undeviating singleness of purpose, generously accorded to him the post of honor he had won. His perfect openness, sincerity and simplicity of character spared him the pangs of a jealousy somewhat too common among medical men. He was ambitious not so much to surpass others as to qualify himself to deal with and alleviate human suffering; and he wounded no vanity and mortified no ambition, because he thought less of his fame than the fulfilment of his duties. For many years, therefore, he had been yielded by general consent a kind of professional precedence which he accepted with accustomed modesty.

In the effort to give the profession its proper degree of dignity and character, the State Medical Society of North Carolina was organized, and Dr. Strudwick was made its first President, delivering on the occasion of his inauguration an address which was long remembered for its earnest and simple eloquence; for in this, as in nothing else, did he sacrifice purpose to effect.

In his intercourse with the members of his profession he was generously appreciative of the merits and claims of others, kind in language, liberal in sentiment, and in relation to his younger brethren, by counsel and kindness giving strength and encouragement to their progress.

His duties made him averse from active participation in other affairs and though a public spirited citizen with very decided views, he never sought nor held office, except that of commissioner of the town of Hillsborough, which he filled in his earlier years. He was a warm friend of Internal Improvements, and was one of the original stockholders in the North Carolina Railroad Company; and came forward with others, when the fate of the measure depended upon the subscription of Orange county, to save the charter.

It is needless to say that he was a devout, a sincere, and an humble Christian. Unobtrusive in this character, as in every other, yet the light of his faith beamed with a steady unwavering flame, throwing a beautiful halo around the days of his prosperity, and lighting with cheerful glow the pathway trod in later years through the gloom of adversity. He was for many years a member and Ruling-Elder of the Presbyterian Church.

There was a long period of his life when fortune smiled upon him. There came a day when she frowned; and that day came when age had bowed his form, and the rest that he had earned would have been grateful to him. Yet, amid these smiles or frowns he was the same. In the days of prosperity, surrounded with every comfort, commanding every luxury, and dispensing the most diffuse and generous hospitality; without complaint when the weight of adversity was laid upon him, he went on to fight the battle of life with the freshness and cheerfulness of his younger years. His pleasant smile, his cheery voice, his active movement, all unchanged, gave no token of reverse that would have crushed men less buoyant in temperament, less submissive to Divine decree.

In the contemplation of all his characteristics, candor must accord to him a large proportion of the attributes of greatness. For there is that alliance between greatness and goodness, an identity of quality in the two, the recognition of which intellectual pride may spurn, but which unprejudiced judgment may unwillingly

admit. What the world calls greatness has in it much of the alloy of human frailty, or worse. Goodness comes from a higher source, and directs itself to loftier aims. The one makes its appeal to human admiration, and builds itself on human applause. The other finds its reward in the voice of conscience, and in the spectacle of happiness diffused, sorrows mitigated, suffering relieved, in the blessings of the poor, and in the enduring influences of a bright example. None have gone down to the grave more richly crowned with the merits of good works, none more revered and beloved in life, none more mourned and regretted in death than he whose character is here imperfectly sketched. •

It now remains to mention the circumstances which brought so abruptly the life of this great and good man to its close.

On the morning of the 29th day of November, 1879, Frederick N. Strudwick, Esq., Solicitor of the 5th Judicial District, returned home from his circuit so ill that very active treatment was needed to relieve him. Atropia was administered by hypodermic injection, one-twelfth of a grain of which was prepared in solution. Three drops of this were used, the remainder in a glass tumbler, being set aside on the mantel. About 1 o'clock P. M., Dr. William Strudwick entered the room with a flask of whiskey for the use of the patient should it be required. Dr. Edmund Strudwick, then on the point of going out for dinner, asked his son to pour him out a little of the whiskey as he was wearied and weak, presenting at the same time a tumbler which he had taken from the mantel. This was the glass in which was the atropia; but at the time the mixture had been forgotten; and there being three tumblers side by side on the mantel, discrimination was not thought of. Dr. Strudwick drank the whiskey, and went out and ate his dinner; and after returning, smoked a pipe and then lay down to take a nap, a usual after dinner habit with him. He slept about two hours. On awaking and attempting to rise, his limbs failed him, and he sank almost to the floor; but his grandson, Mr. R. C. Strudwick, sustained him, and assisted him to the adjoining room in which lay Mr. F. N. Strudwick. Up to this moment, there had been no suspicion of the fatal fact. But, in essaying to speak, his voice, thick and inarticulate, attracted the notice of Dr. Wm. Strudwick, and caused him to look up in his father's face, and he saw at once the reason. He told his

father that he had taken the deadly potion, and urged the most vigorous treatment. But before yielding, Dr. Strudwick said "give me my book" (almost his last distinct utterance) referring to some familiar treatise on toxicology. The book was given to him and he attempted to read. But the dilitation of the pupils was then so great that this was impossible; he laid the book down and was put to bed. Dr. Wm. Cameron and Dr. Thomas J. Wilson, were in attendance, and with Dr. Wm. Strudwick, used every appliance that knowledge and experience could suggest. Dr. A. W. Knox was summoned from Raleigh by telegraph and promptly obeyed. But the poison had fastened its hold upon the system in the long interval between its use and discovery, and all remedies failed; and relapsing more and more into unconsciousness, Dr Strudwick passed away painlessly at ten minutes before 8 o'clock on Saturday night, November the 30th, A. D., 1879.

He was buried in the cemetery of the Presbyterian Church at Hillsborough at half past 3 o'clock on Monday afternoon succeeding, the funeral being attended by almost the whole population of the town.

## OBITUARY.

HENRY G. LEWIS, M. D.

The death, from phthisis-pulmonalis, of our esteemed and beloved friend, Dr. Henry G. Lewis, which occurred at his residence in Plymouth, N. C., on 19th of January, 1880, cast a gloom of darkness over the community in which he lived and served.

He was born in Tyrell county, May 31st, 1842; graduated at College Physicians and Surgeons, Baltimore, 1873. He was a close observer, an accurate and ardent student, and bestowed more care than usual for one so constantly engaged. He was much loved by his patients and friends, and his skill and patient care as a physician, were duly appreciated by those who secured his services. Professionally and personally his aspirations were high toned and deserving. In his intercourse with his fellow practitioners he was unassuming, affable and courteous. He was a good citizen and felt the responsibility of doing well his duty in every position he filled in life; his memory will long be dear to his friends and he will be sadly missed amongst them.

L. M. P., M. D.

Do you enjoy good *ETCHING*? Then get *PORTFOLIO* for 1880 from J. W. Bouton, 706 Broadway, New York.



DR. A. R. LEDOUX, Chemist of the North Carolina Board of Health, and of the Agricultural Experiment Station, has resigned.

Dr. Ledoux has done most excellent work as analyst of the State Board of Health, and his personal influence as a member of the Board has always been exerted in the right direction. We will be fortunate in supplying his place.

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DR. WM. BUDD and DR. SÆLBERG WELLS are among the recent deaths of eminent writers and teachers of Great Britain. Dr. Budd belonged to the past generation, Dr. Wells to that active vigorous generation of British teachers of medicine, which so highly distinguishes that country above her neighbors.

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DR. EDWARD C. SEATON, Medical Officer of the Local Government Board, London, has resigned his position on account of failing health. Dr. Seaton is well known as a most ardent and enthusiastic Jennerian, who has done great service to his country in efficiently organizing public vaccination. Whether Dr. Seaton's resignation will remove the obstacle to the introduction of animal vaccination in Great Britain remains to be seen, but it is well-known that he was unwilling to adopt animal vaccination as an acknowledged rival of arm to arm vaccination.

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*Three Little Things.*—To get offensive animal odors from the hands, wash them in a strong solution of copperas, or persulphate of iron. To get persulphate of iron stains off the hands and rid them of the rough feeling, use rapidly a little dilute muriatic acid. To get plaster-of-Paris from the hands (*Medical Record*), a little bicarbonate of soda or potassa added to the water in which the hands are washed.

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#### BOOKS AND PAMPHLETS RECEIVED.

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Otorrhœa. By Joseph A. White, M. D., Richmond, Va. Reprint from Virginia Medical Monthly.

Public Health. An Address before the Workingmen's Institute, Des Moines, Iowa. By Dr. A. G. Field. Pp. 8.

On Squint caused by Hyperopia or Long-Sight. By J. A. White, M. D. Reprint from American Medical Journal.

Responsibility Restricted by Insane Delusion. By T. L. Wright, M. D., Bellefontaine, Ohio. Reprint from Cincinnati Med. News.

On the Internal Use of Cold Water for the Sick, and on Thirst. A Clinical Lecture at the Pennsylvania Hospital. By J. Forsyth Meigs, M. D.



A Manual of the Practice of Surgery. By W. Fairlie Clarke, M. A., M. B., (Oxon), F. R. C. S. New York, 1879. Wood's Library of Standard Medical Authors.

Glaucoma. Report of a case of Glaucoma with a resumé of the recent theories on this subject. By J. A. White, M. D., Richmond, Va. Reprint from Transactions Med. and Ch. Faculty, Maryland.

Transactions of the Tenth Annual Session of the Medical Society of Virginia. Held in Alexandria, Oct. 21—23, 1879; Richmond: J. W. Ferguson & Son. Bound with Virginia Medical Monthly.

A Biographical Dictionary of Contemporary American Physicians and Surgeons. Edited by Wm. B. Atkinson, M. D. Second Edition. Enlarged and Revised. Philadelphia. D. G. Brinton, Publisher.

Valedictory Address to the Graduating Class of the Medical Department of the University of California. W. F. McNutt, M. D., L. R. C. P., Ed. University of California. Reprint from the Western Lancet.

Importance of Sanitary Education and Legislation. Report of Committee on Physiology and Hygiene as a Branch of Popular Education, Read before the Iowa State Medical Society. By A. G. Field, M. D. Pp. 8.

The Alienist and Neurologist. A Quarterly Journal of Scientific, Clinical and Forensic Psychiatry and Nenrology. Edited by C. H. Hughes, M. D., and an associate corps of collaborators. St. Louis, 1880. Vol. I, No. 1.

Report of Robert Lebbby, M. D., Health Officer to the General Assembly of the State of South Carolina at the regular Session of 1879, for the Fiscal Year ending October, 1879. Columbia, S. C. : Calvo & Patton, State Printers. Pp. 16.

Brain Work and Overwork. By Dr. Horatio C. Wood. American Health Primer from Presby Blakiston. We learn by an accompanying card, that Mr. Blakiston has purchased the stock of Lindsay & Blakiston and will continue the business in which the old firm has been so long famous, at 1012 Walnut St., Philadelphia.

Annals of the Anatomical and Surgical Society, Monthly. Edited by Charles Jewett, M. D., associated with E. S. Bunker, M. D., G. R. Fowler, M. D., L. S. Pilcher, M. D., F. W. Rockwell, M. D. New York: G. P. Putnam & Sons, 182 Fifth Avenue. Subscription, \$2.00 a year.

It is a real pleasure to see such an excellent specimen of typographical art as is exhibited in this Journal. The contributions in this number are from the pen of Prof. Jno. C. Dalton on "Cerebral Anatomy," illustrated with clear, original wood-cuts; another contribution by Dr. Lewis S. Pilcher on "Double Monsters"; and still another delightful sketch of the lives, times, and works of the old masters of anatomy and surgery, by George Jackson Fisher, M. D., with reproduced cuts from Vesalius' work, of the date of 1543.

# NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DeROSSET, M. D., }  
THOMAS F. WOOD, M. D., } Editors.

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Number 3.      Wilmington, March, 1880.      Vol. 5.

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## ORIGINAL COMMUNICATIONS.

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### A CURIOUS CASE OF MIDWIFERY.

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On Wednesday, November 19th, at 11 A. M., I visited Lela P., a finely developed and robust mulatto, aged 27 years, in labor with her third child. She had been in pain for several hours. Upon examination, I found the labor but little advanced; *os* open the size of a quarter of a dollar; head presenting; tissues soft, relaxed, and promising an early termination of the confinement. The pains were infrequent and not strong; they increased gradually during the day, and at 9½ P. M., the waters were discharged. After this, all pain subsided and patient slept the entire night.

On Thursday morning, 10 A. M., found *os* more open, but pains so feeble and transient that I thought it advisable to relieve the uterine inertia. I prescribed 20 drops of the fluid extract of ergot, every hour, until five doses were taken, and requested that I should be sent for when the pains became active. The summons came for me late in the evening. Found patient restless, with frequent and

severe pains, but not of the "bearing down" kind. Examination, discovered a kind of polypoid growth occupying the upper part of the vagina, which, upon first touch, felt more like the genitals of a male foetus than anything else. I was at first startled at the idea of a breech presentation having been substituted for what certainly was a head case in the morning. Further investigation, however, very soon led me to abandon this view of the case; but I continued puzzled in regard to the real nature of the presenting tumor. I could easily circumscribe this with my finger within the *external os*. It seemed as large as an egg, though flaccid, and as strikingly pediculated as a common polyp coming from the cervix. No *internal os* could be made out, though the stem of the tumor passed up to where this opening was supposed to be located. Outside of the patulous *external os*, through the tissues forming the vault of the vagina, could be felt what I took to be the presenting head. Believing that the inner *os* was tightly encircling the tumor, I made repeated efforts to get my finger within this to demonstrate the fact, and to learn more of the real nature of the case. I entirely failed. The elongated polypoid character of the growth suggested the possible existence of an *encephalocele* or a *meningocoele* that had passed through the inner *os* and been somewhat changed by its tight and sharply cut margins.

The restlessness and suffering of my patient called for relief, and requiring assistance, in any attempt at delivery, I sent for my instruments, and at the same time requested the aid of my friend, Prof. F. M. Robertson, who had had fifty years experience, and, had long been a teacher of obstetrics. Upon the doctor's arrival, without giving him any information, I begged him to examine the case and give me his opinion of the presentation. He did so, carefully and long, and then turning to me said, he had never before encountered such a condition. He could make out the head through the vaginal vault, but he could not affirm anything as to the tumor, nor could he find the inner *os*. We finally determined to open up the case by puncturing the head through the presenting tumor, as a first step towards attempting delivery. The foetal heart could not be heard, and we concluded that the child was dead. The patient had been taking chloroform in small quantities, but had never been brought thoroughly under its influence. Anaesthesia was now fully

induced, and I proceeded to make another and final examination previous to using the *vectis*. This effort suddenly disclosed to me the inner *os*. Pressing my finger closely around the stem of the tumor, it suddenly slipped higher up, entered the *os*, now relaxed by the chloroform, and impinged fairly against the resisting head. A second finger, and then a third, and a fourth, was made to follow. The *os* yielded more and more under the force of this entering wedge, and I was soon enabled to clear up all doubts, and to recognize the fact that the tumor was only a remarkably developed "*caput succedaneum*." Never before had either of us seen a "*caput*" so shaped, or so constructed, nor could we have before believed that the tissues of the scalp were capable of such œdematous elongation or development.

My success so far now induced me to change my plan of proceeding. I put aside the *vectis*, and in due time adjusted Hodge's long forceps to the head. Craniotomy, even with a dead fœtus, is horrible to contemplate, and I preferred risking the use of the forceps, even with an *os* rigid enough to make me fear a laceration. By slow and careful traction the delivery of a dead female child was soon effected. Examination after the removal of the placenta, revealed the fact that the cervix had sustained a rent about an inch long upon the left side, passing through the margin of the external *os*.

Patient reacted well; had no serious hemorrhage, and was left after an hour in a very comfortable condition. She did well for six days. Used anti-septic injections to vagina during this period. Upon the seventh day I had occasion to leave the city. On the morning following, patient was suddenly prostrated to syncope by a copious bleeding. Brandy was given freely until assistance could be had. Then, under professional skill, the vagina was tamponned with styptic cotton. No further hemorrhage ensued. The tampon was removed after two days. Patient recovered in good time, and has since enjoyed excellent health.

*Remarks.*—It may be interesting for me to furnish some details of the previous history of this woman. She had married at the age of 21, was of good constitution; but suffered from painful menstruation, and never conceived until after having been married two years. I then attended her for the first time and divided the *cervix* by the bilateral incisions; also dilated with laminaria tents

at times during a period of several months. She conceived nine months after my first operation, and was delivered by me, with forceps, of the first child, a well-developed male. I also attended her in her second confinement more than a year after the first—this second child, a male was still-born, after a tedious labor of nearly three days. I had not been summoned at the later stage of the labor, but upon accidentally visiting the patient found the child had long been arrested at the vaginal outlet. It only slowly emerged after my making forcible pressure over the uterus. The history of the third labor is that given above.

There are, undoubtedly, several points of interest pertaining to this history and case: 1. We may inquire into the causes operating to produce a "*caput succedaneum*" so unlike in shape and developments those we usually meet with. 2. The probable influence of the original operation upon the *cervix* in determining the condition of the *os* at the time of labor. 3. The probable rôle enacted by the ergot administered. 4. The great value of chloroform in opening an *os* which was practically impenetrable. 5. The source and the cause of the bleeding seven days after delivery.

In regard to the first point we may remark that the "*caput succedaneum*" as usually observed is found in connection with a well dilated *os*, and towards the termination of labor, when the pains are most expulsive in character, and the head in the axis of the vaginal canal. The œdema of the scalp which occasions the formation of the tumor, is brought about by the want of support which the tissues experience in the vaginal canal as the contracting uterus is forcing its contents downwards. The active constriction of the *os* itself has but little to do with this. Hence, these tumors of the foetal head are not pediculated, but rather conical or roundish with broad base in contact with the skull.

In the case before us, the circle of the *inner os* was small, and actively constricted the scalp tissues as these were forced through it and into the vaginal canal. The tumor resembled and grew like a hernial tumor does as its circulation becomes interfered with; but the constriction at the opening in this case was more active than is ever possible in connection with a hernial ring. The constriction was likewise passive in virtue of the mere rigidity of the margins of the *os*.



This later condition was more assured, perhaps, by the effect of my original operation upon the cervix. I am inclined to believe that the cicatricial tissue which much result from such operations (it could not be felt in my examination at the time of labor) favors the rigidity of the cervix and the *os*, and thus furnishes an additional impediment to natural labor. At the same time I am glad to be able to say, from experience in a few cases, that these operations on the cervix offer no formidable complication. I have known instances where conception, after such operations, has been followed by natural and easy delivery. Statistics upon this subject would be valuable.

Third, I am inclined to attach much importance to the action of the ergot in the case. Before the administration of the drug, the cervix was soft, and the *os* apparently very dilatable. It is not my habit to give ergot in labor, but in this instance, at the particular time noted, it seemed really to be indicated. I am now disposed to think that the use of the agent was injudicious and hurtful.

The active part played by the circular fibres of the uterus, or the inner *os*, (be it remembered that the outer *os* was soft and patulous) was most assuredly due to the ergot. Had this agent been longer continued, or the labor not been terminated by art, we might have reasonably looked for rupture of the uterus at some point. The administration of large doses of chloral hydrate, together with the ergot, would, perhaps, have been better practice, and have worked out different results.

Fourth, The value of chloroform in a rigid *os* has long been recognized, and can be safely given, however, only while the physician is present. It did not seem to be indicated when the ergot was prescribed. Chloral hydrate has the advantage over chloroform that it can be given at stated times regardless of the presence of the practitioner, and moreover it does not seem to retard the labor, as chloroform most assuredly will do at certain stages of its progress.

While we fully understood the value of chloroform as a relaxant, we were not prepared for the very marvellous promptness with which it acted. Without it we feel convinced we could not have opened the *os* sufficient to inform ourselves of the true nature of the case. And yet, with it, in a few minutes, our hand and our instrument were passed through an opening that we had in vain endeavored to recognize.



Fifth. The hemorrhage on the seventh day we can attribute in no way to the uterine cavity. There were no placental remains to escape, and the contraction and involution had gone on securely. It is most probable that the bleeding resulted from the separation of a slough at the point of rupture in the cervix. It was really secondary and traumatic. The tampon carried well up to the cervix did successful work. The fissure may give trouble in the future, but so far it has not developed any symptom. As we are not one of those who hunt up such abnormalities simply to remedy them we shall not at present interfere.

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#### NOTES ON A CASE OF FATAL PLEURISY.

By H. W. LILLY, M. D., New York.

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The rapidity with which serous effusion may accumulate within the chest has a most important and practical bearing on the treatment of acute pleurisy. In this affection it is exceedingly rare that a fatal result is due to a sudden production of liquid sufficient in quantity to seriously interfere with the act of respiration and cause death by apnoea. But that such an occurrence is possible, and is indeed sometimes met with, makes it incumbent upon the physician to exercise great care and vigilance when treating a case of simple pleuritis. The following case, which came under my observation, has amply impressed me with the importance of this fact:

John G., æt. 29, sailor, was admitted into the ward on January 16th. The patient stated that he had always been remarkably healthy, never having experienced an hour's sickness until four days ago. For two weeks previous to that time, he had been indulging to excess in alcoholic drinks, and had consequently exposed himself more than usual. When recovering from the immediate effects of this "spree," he noticed first a sharp pain in his left side, which was much aggravated by coughing. Subsequently his head began to ache, and he had a feeling of general *malaise*. In two or three days, the pain in the side began to abate, but otherwise there was no improvement, and he was sent to the hospital for treatment.

On admission, the patient presented a robust looking appearance, complexion florid, muscle well-developed; pulse full, strong and rapid; respiration, 20; thermometer in the axilla, 101°; bowels constipated; tongue coated and moist; tenderness over the epigastrium with a disposition to vomit. Physical examination:—Liver and spleen natural in size; symmetrical chest; heart not enlarged, free from murmurs, and apex-beat normally situated. Examination of the chest by all the means of physical exploration gave unmistakable evidence of the existence of fluid which occupied about one-third of the left pleural cavity.

This, together with the subjective symptoms and previous history, led to the diagnosis of acute pleurisy with effusion.

Ordered pulv. jalap co., gr. xx, to be repeated in six hours if no cathartic effect, and potass. acetat. ʒss. every two hours.

Free elimination by the bowels and kidneys was thus kept up, and, as another measure for promoting absorption of the liquid, the syr. ferri. iodid. was given in teaspoonful doses three times a day. For several days the patient improved in his general condition, but there was no diminution in the amount of the pleuritic effusion. It remained stationary for a week, and then began to increase gradually until the chest became more than half full. The patient gave only the slightest evidence of dyspnoea, however, and, with the exception of some gastric disturbance, was very comfortable.

On Jan. 25th I found the pleural sac three quarters full of fluid; and, as the respiration, though somewhat accelerated, was otherwise tranquil and natural, no more active measures were employed than those previously used to promote absorption. On the 27th, however, the chest completely full, and the breathing was much embarrassed. It became necessary then to remove the liquid. This I did with a common Davidson's syringe, reversed and properly fitted with a small trocar and canula. Sixty-five ounces of fluid were withdrawn; and, though the chest was not emptied, it was deemed wise to desist as the patient was seized with a severe fit of coughing, and complained of vertigo with a sense of constriction about the thorax.

Physical examination showed that half of the effusion had been removed. The patient expressed himself as feeling much better and was evidently greatly relieved. On interrogating the

patient next morning, when making my customary rounds at 10 o'clock, I found that he had passed a quiet night, had enjoyed a refreshing sleep and suffered no pain. At the time of my visit, however, the respiration was more hurried than on the night previous. But this was not due to an excess of fluid; for, just before I entered the ward, the patient had assumed a sitting posture while taking nourishment, and I attributed the acceleration to the slight exertion which this entailed. The chest I carefully examined. The liquid, beyond the possibility of a doubt, occupied not more than one-half the pleural cavity, not having sensibly increased since paracentesis was performed. For unusually clear resonance was obtained over the greater part of the scapular region, the patient being erect, and mensuration showed only the slightest difference in the two sides of the chest. In fact, the resonance above the liquid was tympanitic, I thought, which excited the suspicion that air might be present, though no other sign of pneumo-hydro-thorax could be discovered. This observation was made at 10 o'clock in the morning. At 2:30 P. M., of the same day, I was hastily summoned by the orderly in charge, who represented the patient's condition as being very serious. When I reached the bed-side, the patient was bathed in a cold, clammy perspiration, lips cyanosed, pulse small and feeble, pupils widely dilated, breathing quick and labored. There were, in fact, all the symptoms of urgent dyspnoea and impending dissolution. After stimulating the patient freely, I made a hurried examination of the chest. This satisfied me that it was *full of fluid*, which mechanically obstructed the circulation by pressure upon the large blood-vessels within the thorax, and gave rise to the symptoms before me. A chest, which, *a few hours ago*, was almost symmetrical in its proportions, presented now on its diseased side an enormous degree of dilatation; the cardiac impulse was felt on the right side of the sternum; the intercostal depressions were bulged out, conveying to the touch a feeling of fluctuation, and the whole surface afforded flatness on percussion.

These physical signs were elicited during the few moments I was compelled to wait for an aspirator. When the instrument was made ready, preparatory to using it, I had the patient's body elevated, and was just on the point of plunging the trocar into the chest when the respiration ceased, the face became intensely cyanosed.

mucous streamed from the mouth and the patient died. Could it be possible that the liquid has accumulated in this short space of time? I skeptically asked myself this question; though the evidence afforded by physical examination seemed to render it a matter of little doubt. I accordingly looked forward to the post-mortem with no small amount of interest. The autopsy revealed what had been anticipated. The pleural cavity was completely full of the effused liquid, and the almost carried lung was compressed into a small nodular mass against the spinal column in the upper posterior part of the chest. Before the thorax was opened, the abdominal cavity was emptied of viscera, and filled with water. A puncture was then made through the diaphragm from its under surface to ascertain if, by the presence of bubbles in the liquid beneath, there was evidence of air in the chest. There was none. All the other organs were normal save the presence of some congestion due to the interrupted circulation, and no other cause of death could be discovered except the mechanical effects of an excessive pleuritic effusion.

This case I consider especially instructive. It has taught me with what remarkable suddenness and copiousness, a liquid exudation may be poured out from a serous membrane; and consequently how very important it is, when the pleura is the seat of inflammation, to make repeated and careful examinations of our patient's chests if we would avert the fatal issue that sometimes supervenes when least expected.



## AN INTERESTING CASE OF OBSTETRICS AND SEQUENCES.

By V. S. McNIDER, M. D., Jackson, Northampton Co., N. C.



Having previously been notified as family physician of the approaching confinement of Mrs. [A. B., multipara, æt. 34, I was promptly ready to obey summons on the night of Dec. 3d, 1877. On arriving at the bed-side of my patient, who was a nervous, highly

sensitive woman, I learned that the bag of waters had burst ; but that she was in no pain, and had had none. Enquiry elicited that she had taken no violent exercise, nor lifted any undue weight. I could see no cause for the rupture of waters, other than that it was perfectly normal. Quieting her fears and apprehensions, I spent the night at her home, although only a short distance from my office, and waited for labor to progress. Not a pain did she have through the night ; and when I called next morning, not seeing her when I left early, as she was then asleep, I found her sitting up in bed and eating breakfast.

Without any pain or inconvenience whatever, she passed on to the afternoon of the 5th, when she was taken in actual labor, and I was hastily summoned. Examination revealed a dilating and dilated os ; vertex presentation ; occiput to left.

Assuring her that all was right enough, I retired to an adjoining room, from whence I was called in about three quarters of an hour to her side, and she informed me that something was wrong. On examination I found the left shoulder presenting and the left arm extending from the vulva. Determining to deliver by version, I hastily dispatched a messenger for another physician of the village. Hardly had my messenger left the house, strong, powerful pains coming on, before I found I had a case of twins to deal with—that already another head was presenting ; and even it was expelled with the arm of the first child still extending. The physician summoned, arrived in a few moments, and administering chloroform for me, I delivered the first child by version. It was dead—no means could revive it, and weighed 7 pounds—a female. The other, a male and living, weighed 8 pounds. I am satisfied now that the girl child died on the night of the first alarm.

The lady recovered nicely—no trouble whatever except at times an incontinence of urine, which continued to trouble her for some months, and which was treated with benzoic acid, and muriated tincture of iron, and finally relieved.

All went well with her until weaning her child, the menstrual function was reëstablished for the first time in January, 1879. With the exception that the flow was more profuse than usual with her, and thinking it nothing amiss, she consulted no physician for over a week. The flow continuing and becoming more profuse, a physician



was called who kindly attended my calls, in my absence, I being at the time absent in New York, attending lectures at Bellevue. The case was treated with ergot, acids, position, etc., but no relief obtained. I arrived home the 1st of March, and was immediately summoned to see her; found her almost blanched from loss of blood; flow still continuing, and had continued now for over six weeks; no appetite, weak, nervous, excitable, and greatly alarmed at her condition. I first tried Squibb's fluid extract of ergot in large doses, and it not abating the flow at all, I proposed to examine her womb, and did. No laceration of cervix, granulated surface, polypus, nor any morbid growth on external surface to account for the persistent flow. I then packed the os and cervix with laminaria tents, and left them to remain until next morning. I expected, when I removed them, to notice a polypus attached to fundus or side presenting itself; but such was not the case. Seizing the os with the volsella forceps, thereby bringing it down within reach, introducing finger and sweeping it around, I found the whole endometrium studded with little polypoid growths about the size of split peas. With a dull wire curette, I scraped out the entire uterine cavity, examined again to see that all were removed, and finding it so, sponged it out nicely and put her to bed with the help of the physician mentioned above, whom I had invited to assist me. She barely lost an ounce of blood in the next twenty-four hours, when the hemorrhage entirely ceased. Ergot was given to contract the womb on the denuded surfaces. There was no metritis, no bad symptoms whatever, only a slight rise in temperature which was controlled with quinine. She was then treated with tonics and a generous nourishing diet—milk especially, and kept her confined to bed and lounge. I watched her closely until the next menstrual period which occurred in sixteen days from the day of operating; and it was passed with but little pain and no unusual amount of flow.

As soon as summer opened, I directed her husband to take her to the seaside where she soon regained health and strength. She is now pregnant.

This case is interesting in two phases of it: first, in that one child was born with the arm of another extending which is rare, as I find from my reading; and, second, in that nothing but a thorough search for the diagnostic cause of the persistent hemorrhage and boldly attacking it, could have relieved her.



## MEDICAL ETHICS COMPREHENDED IN MORAL DUTY.

By "1855."

"The rule of conduct governing any body of individuals may be called the ethics of that particular society."

It is well enough, occasionally, for us to adjust our relations, moral and ethical, and review our allegiance to the honored title of "medical gentlemen."

No class of men exert themselves more disinterestedly for the welfare of mankind or undergo more dangerous duties, than the majority of medical practitioners, and while this service is truly "more than armies to the public weal," let us see how we stand toward each other! An able writer on this subject, a few years ago, said that "the true principles of professional deportment was found in the law of Divine Wisdom and Love." "Do unto others as ye would that men should do unto you."

This *only* can be the foundation alike of medical ethics and medical etiquette. This *only* is the true and universally safe principle, and let "charity" be added, which is "forbearing and not envious," and we have all that is necessary to prevent those bickerings, jealousies, or deadly enmities, sometimes indulged by professional men. The same writer truly adds that "the highest rank, the greatest skill are nothing without charity." We have had to regret that these sentiments have not influenced the feelings of some distinguished practitioners. We have seen a sad instance of this want, not long ago in the controversy between one of our own distinguished confrères and an intolerant New York professor, the bitterness of which did not remind one of the gentle whispers of "ministering angels."

Let us remember that we must have the coöperation of our professional brothers, for without this "no great work can be carried on successfully, and we cannot have this, if we neglect a courteous and patient-bearing, one towards another, as gentlemen. "Do unto others," &c.

While we may refer to our national code, for guidance, (and we should refer to it much oftener than we do) yet it is too general in its outlines, there are many points omitted.

A very delicate and yet a very common matter, is a call to see

another practitioner's patient, this, of necessity, in a thickly inhabited community, is of frequent occurrence. When made by the request of the attending physician, of course, there is no complication; but when, as it often happens, it is from the patient himself, then the question must be considered—the *why!* must be asked. We cannot obey these calls with the same alacrity, that we do our own. We must stop to enquire: 1st. Is your family physician unable to answer the call himself? If the reply is, "yes," "he is sick, engaged, or out of the way," then it becomes our duty—*ceteris paribus*—alike to him, to the patient and to ourselves to go, and report to the regular attendant at our earliest convenience, or direct the patient, or his friend to do so.

This is all we can do, if the case is unencumbered by any extraneous circumstances. By this simple, plain and sensible manner of performing a simple and plain duty we do not disturb the status quo; but unfortunately sometimes the case assumes a more difficult aspect. When the patient or his friend declines to go back to his regular attendant, giving, perhaps, an unsatisfactory reason for so declining. This places you at once in an awkward position; but here, our knowledge of human nature enables us to see the bottom of the trouble, whether it is deep or near the surface—it may be a fit of ill-humor, from an imagined neglect and this with an irritable impetuous nature, for the moment, is magnified, or we may discover a deeper feeling, but no matter *what* we see or *what* we think, it is our bounden duty to have ourselves acquitted of any possible blame by remembering right here the "Golden Rule." This will lead us in the right path. It is assuredly right and proper and our moral duty to see to it, that our brother physician has received the facts in the case, *as they are*. I am happy to state that this illustration is drawn to the extreme, but we should be prepared in the event of its occurrence "to do as we would be done by." Put yourself in his place, and the promptings of a good conscience will point this way. You may have every pocket stuffed with written codes, if this animus is not in the breast, they will avail but little.

This is not a trivial matter, or one to be lightly considered, for infractions here, may sever professional ties and cause much social discord, in fact, it is impossible to neglect these matters and retain

pleasant relations with our brother practitioners. Another point we must watch with "Argus eyes," for it is an insidious foe to the dignity of the profession—it is this: in most communities, a uniform fee-bill is adopted by the profession, where the prices for certain services are exactly stipulated, and while, in most associations, a "wholesome discretion" is left with the subscribing numbers, no liberty is implied to undercharge or to overcharge; and yet, unless care is observed we are liable to do an injustice to the profession, by neglecting to explain to a patient, whom we desire to favor, that the regular charge in such cases is thus and so, and let him understand the uniformity and the binding nature, so that ever after he may have no opportunity of saying, "such an one did this service for less," and thus bring discredit upon the profession, and this also is not so trivial a matter as it may, at first glance, appear, for I have seen it, where no wrong was intended, merely an oversight in the former medical attendant in not explaining. This is always embarrassing to the next practitioner, so we may as well be careful in little things; besides, nothing tends more effectually to disparage us in the eyes of the world, than to discover mercenary influences at work amongst us. Some one has said that "the wordly success of the physician depends upon the opinion of his professional bearing entertained by the public."

Another point in medical ethics, that should be regulated by the same "Divine Rule," this is the relation between seniors and juniors in the profession—the "old doctor" and the "young doctor."

We are never too young in the profession to not *know* our duty, or too old to *forget* it.

We should expect of the junior members a laudable ambition—an honest high ambition to attain the highest place in the temple of fame, without over-reaching the bounds of decorum, without attempting any devious ways either of greed or duplicity, but up the straightforward path marked out by the foot-prints of the illustrious men of our profession in every generation, whose escentcheons have been handed to us without blot—remembering that—soon upon themselves, must the honors and emoluments of the craft be placed.

Upon the other hand, the matured in practice—the older members—should sedulously guard themselves in relation to the younger,

as they fall in from time to time along with those who have stood the heat and burden of many years. We must not forget the sensitive feelings of the newly-fledged disciple of the same noble calling as ourselves, perchance, of the same honored Alma Mater. We must avoid any unkindness and make it the rule of our professional life to nurture these younger brothers—remembering that a few years ago we occupied the same criminal position.

“The crime of being a young man” has a reality in the young doctor, especially should he be surrounded with unfriendly seniors; for it must be remembered that the cruel public looks with doubt, if not contempt upon his modest efforts. How cruel, indeed, would it be, for the veterans to withhold encouragement from him? He looks to his “elder brother” for kindness—to whom else can he look? This, like many other delicacies has no page in the “code,” save the requirements of a stiff, respectful deference, which we may “manufacture out of icicles,” if we choose to forget the Divine injunction, “Do unto these as ye would that men had done unto you” at the beginning of your career. This covers it all, and I repeat, can be the only foundation for true medical etiquette. The conclusion of the whole matter might be summed up, in this great fundamental principle—“Do unto others as ye would,” &c.

One of the Fathers long ago said: “The grace that yields with candor the palm of superiority to a competitor and which praises a rival rather than depreciate him, *is to be obtained by minds of the highest order only.*” No written code of ethics, can improve on this principle.

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*Malarial Bright's Disease.*—By malarial albuminuria I understand (says Prof. Da Costa) a condition characterized by albumen in the urine, with granular and hyaline tube-casts coming on slowly, associated with dropsy, and as gradually passing away. In the long run, and with proper treatment, such cases usually recover. Their very essence consists in their gradual development, with impaired blood, dropsy and bloody urine. Such cases have no acute stage.—*Canadian Jour. Med. Sciences.*

## SELECTED PAPERS.

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### THE CAUSE OF INTERMITTENT FEVERS AND THE NATURE OF MALARIA.

By Professor E. KLEBS, of Prague, and Professor CORR. TOMMASI-  
CRUDELI, of Rome.

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From the great interest and importance of the subject of malarial fever we are induced to give the following valuable paper by Professors Klebs and Crudeli the most prominent position in our journal, though appearing originally as a paper instead of a lecture :

Professor Klebs, having gone to Rome last spring with the intention of investigating the cause of malarial fevers with the assistance of a Professor of the Roman University, Dr. Tommasi-Crudeli, he was soon able, thanks to the kindness of several Roman land-proprietors, to obtain the necessary material for those researches, from the soil and air of the infected districts, partly of Rome itself, partly of its environs, so ill-famed for fevers—that is, from the Roman Campagna and the Pontine Marshes.

From the introduction to their pamphlet we see that the two investigators followed a very deliberate plan in the performance of their task. First, they furnish us with a very able description of the mode of propagation of the malarial fevers. This naturally forms the basis of their investigations into the cause of the disease, the ideas about which have been so vague as to induce constant changes in the theories of its origin. A fresh theory takes the place of the previous one when recent facts and experience concerning the outbreak of the disease become known. If it be true that marshy districts are the favorite seats of intermittent fevers, it is not the less true that there are no fresh cases to be observed so long as a sufficiently high level of water separates the soil from the air. Further, it is no longer possible to consider malaria simply as a marsh miasm ; for it is not found in every marshy district, whilst, on the contrary, it shows its existence in districts absolutely free from marshy ground—even where the soil has never been constantly wet. It is also impossible to state a distinct connection between the chemical and geological structure of the



soil and the manifestation of malaria. Again the accumulation of decaying organic material in large quantities is not sufficient alone to explain an outbreak of intermittent fever. All these conditions, which, it is true, have their part in the manifestation of the miasm, are to be considered only as adjuvant causes. It has been established beyond doubt, that in malarial districts three distinct factors are necessary for the production of intermittent fevers—(1) high temperature of the air ; (2) constant moisture of the soil ; and (3) free access of air to the moist layers of the ground. Several pathologists have been induced by such facts to deny altogether a specific course of what is not common in English practice—a severe frostbite, a poor unfortunate, in a double sense, walked cause of malaria. They numbered this disease amongst those caused by cold, because, according to all experience, the last named condition takes a great part in the outbreak of the disease ; but they completely forgot that in countries free from malaria, cold alone never causes intermittent fevers, and that, on the other hand, the malarial poison causes those fevers without any previous cold. Others formed the idea that malaria might find its origin in a parasitic organism, whose development must necessarily depend not only on favorable external conditions, but on the existence of a specific germ. Beyond the analogy of intermittent fever with other infectious diseases undoubtedly of parasitic origin, such as relapsing fever and splenic fever, one circumstance goes far to corroborate the parasitic theory—namely, the fact that malaria undergoes a very rapid increase, when the known favorable conditions for its developments are no longer restrained by culture of the soil. Italy furnishes numerous illustrations of this point, because the malarial places have nowhere else been known with such exactitude from ancient down to recent dates ; and because the difference between ancient and modern times as regards the prevalence of these diseases is far too great to be attributed simply to chemical and physical changes in the soil. Such an enormous increase is much more easily explained by assuming that a parasitic organism might have spread to such a large extent because the obstacle to its development had ceased to exist. The fact that the malarial poison is limited chiefly to the layer of air situated immediately above the surface of the soil, points to a corpuscular nature of the poison, because such particle can spread



farther only by motion of the air, whilst a hypothetical gas would find no difficulty in diffusing itself through the upper layers of the atmosphere—even if we had no regard to the fact that no such gas has ever been detected by chemical analysis.

During the last twenty years many efforts have been made to find a specific malarial fungus—with more or less success. Whilst a certain number of scientists charged some forms of algæ, found partly in the marshy water of malarial districts, partly in the marshy soil, with the production of malaria, but failed to give real proofs for their assertions, others endeavored by experiments on animals to attain the solution of the problem. Griffini injected dogs and rabbits with dew collected from rice and marshy fields, and produced by such injections, elevations of the bodily temperature, but no distinct febrile attacks. Moreover, the spleen in those animals remained normal, and there was no augmentation of the organisms found in the dew to be observed in their blood. Similar injections made by Lanzi and Terrigi in the year 1870 gave no more distinct results, but in several of the animals which had perished after a smart attack of fever, the liver, the spleen, and also the blood of the portal vein, contained black pigment. Thus this method of investigation seemed not altogether quite unsuccessful. To establish a substantial theory of a parasitic origin of malarial diseases it is necessary to prove (1) the constant existence of a definite species of organism in the malarial soil as well as in the air situated above such a soil; (2) that this same species of organisms is alone sufficient, without the concurrence of any other disease-generator, to produce true intermittent fever. To obtain the latter proof it is also indispensable to experiment on animals; and such an experiment would be the more conclusive, the better we should succeed in isolating an *active* organism from the marshy soil, and in introducing it in a suitable medium into the living animal. Further, it would be necessary to have the three following conditions realized, to enable us to recognize the disease produced in the animal by the introduction of the organisms as true intermittent fever—namely: (1) the existence of distinctly intermittent feverish attacks; (2) the enlargement of the spleen in the characteristic form—that is, a well-defined firmness of that organ, which is distinguishable from the enlargement of the soft septic spleen; and (3) the absence

of a noteworthy diminution of the weight of the animal, at least during the first feverish attacks. Considering the first-named condition, it is true that, in the graver forms of malaria infection in men, the fever often enough takes on a continued character, or has it from the beginning (*perniciosa*); so that in the animal also a continued fever would not perfectly exclude the existence of malarial infection. Another reason of some moment, tending to show that domestic animals generally are unfitted for experiments on malaria, seems to be their oft-observed immunity from intermittent fevers in malarial districts. Still, this is not absolutely proved; and the authors assume, on somewhat hypothetical grounds, that there might exist in the animals special protecting conditions against the infection with germs. But we shall soon see that the scruples in that direction have been unfounded. Lastly, we have to note another important kind of evidence for the malarial infection of animals; that is, the existence of the characteristic black pigment in the spleen, the liver, the marrow of the bones, and the blood—a pigment which contains iron in inorganic composition (recognizable by the blue color after treatment with ferro-cyanide of potassium and hydrochloric acid—a reaction not to be obtained with hæmoglobin). From the existence of iron in that form it follows that during life, and in the interior of the otherwise unaltered blood-corpuscle, the hæmoglobin becomes decomposed and its iron set free by the influence of the malarial poison.

When the authors had been so far successful as to produce by injections of watery extracts from the marshy soil functional disorders and anatomical lesions in animals, which were completely in accordance with those following the natural infection with malaria, the task next to be undertaken was the isolation from the crude material of the active substance—that is, the true generator of the disease. If that germ belonged to a plant, it would be possible to isolate it from the accompanying organisms by cultivating it from the crude material in a medium suitable for its further development; for then the other organisms will gradually disappear. The method of fractional culture (*fractionirte Cultur*) applied successfully by Professor Klebs in other instances, gave the desired result in this case also. Lastly, it would be necessary to apply filtration for isolating the organisms, and by comparing the results afforded by that

injection with those following injection with the filtered liquid, it can be proved that the special organism alone is efficacious, whilst the second injection has no effect.

Besides those organisms which were taken from the marshy soil, the authors also cultivated germs in a special way, which they had collected from the air above the soil. At some places specially exposed to the malaria a large quantity of air taken from a small distance above the ground was sucked through a ventilator of special construction, which permitted the collection of all corpuscular elements contained in the air on a comparatively small space—that is, on a small glass plate covered with a mixture of glycerine and isinglass. Examination with the microscope showed, amongst those particles of dust, rods in very small number and filiform elements of some length. When those elements were transmitted into fresh urine, free from germs, an abundant development of bacilli was shortly to be seen, which showed the same characters as those cultivated from the soil. It was possible, after repeating the breeding process several times in different mediums at a definite temperature, to obtain a development of schizomycetæ which showed constantly the same characteristics, whether the germs had been taken from the soil, the marshy water, or the air. These fungi appeared as small rods of 0.002 to 0.007 millimetres in length, growing into long twisted threads, which after some time became furnished with joints at the surface of the liquid exposed to the air, or formed the so-called enduring germs (*Dauersporen*) in their interior. Besides the characteristic form of the fungus, it is distinguished from other bacteria by its relations to the air. It is markedly aërobitic. If air has no free access, or is excluded, it will not grow at all, or dies out. Inasmuch as the development of the fungi was so constant, it was probable that this organism was the true *bacillus malarie*. The next problem that arose was to test its nature by injecting it into the living animal.

Before the experiments on the animals could be begun, it was necessary to determine exactly the average dimensions of the spleen as well as the average normal temperature. This done, the experimenters were able to define more exactly the pathological conditions of the injected animals.

In the first group of experiments two rabbits were injected with

organisms collected from the slime and the air of the Pontine Marshes. Every one of them showed intermittent fever after one injection. When they were killed they presented very marked enlargement of the spleen, which contained large masses of dark brown pigment. The spleen and the lymphatic glands contained very small bright corpuscles, which developed, after twenty-four hours in a suitable medium, into threads filled with spores. Formation of pus or any other changes due to inflammatory or septic processes of the different organs were entirely absent.

In further experiments, cultivated bacilli taken from urine, or the isinglass mixture, furnished the material for the injections, and always with the same positive results. The soil, taken from different places in Rome itself and the Agro Romano, proved, in nearly every instance, efficacious also. But the injection with water standing over the marshy ground remained without effect.

Of course it was necessary also to try soil free from malaria. Professor Klebs took infusions of the soil of the garden in the pathological laboratory at Prague. The results remained in this case somewhat doubtful, because the animals became ill, but not in the same way as before, so that it seemed that a mere septic injection had taken place. Two rabbits became ill and died with symptoms of septic poisoning spontaneously at Rome, so that it was possible to compare the two processes directly; and the pathological conditions found in the dead bodies proved different in these latter cases, because pus was found, pigment was totally absent, and the spleen although enlarged, had lost its firmness.

Afterwards Dr. Marchiafava at Rome was able to demonstrate spores and bacilli in the spleen, the marrow, and the blood of three persons who had died of pernicious fever, showing the same characters as those observed by Klebs and Tommasi-Crudeli.

In summarizing the results of their investigations, the authors consider the following facts as proved:—(1) That it is possible to reproduce malarial infection in every form in rabbits in which it is known in men; (2) that the malaria produced artificially in animals is generated by organisms existing in the malarial soil at the time when the outbreak of the fever has not yet taken place. We see, therefore, that those experiments, although small in number, have led to very important results. It is to be hoped that they may

become the starting point for further investigations in the same direction. As the authors themselves allow, there are still many points which require further elucidation. But it is encouraging to see how, by a comparatively small number of careful experiments, good results can be arrived at, when a strictly logical and methodical course of investigation has been pursued.—*Medical Times and Gazette*.

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## THE TREATMENT OF GONORRHOEA.

By PROFESSOR ZEISSL.

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It might be thought that all has been said that can be said on the treatment of gonorrhœa, but the experience of so distinguished a specialist as Professor Zeissl, of Vienna, detailed in a communication to the *Wiener Med. Wochenschrift* (1879, Nos. 38, 39, and 40,) cannot fail to prove of interest to our readers.

The object he has in view, he says, is to indicate some of the leading points in the treatment of catarrhal disease of the male urethra; and he enters into details upon the subject, because both his hospital and private practice have too often given him the sad opportunity of observing that both old and young practitioners are not always careful enough in avoiding manipulations that are highly injurious to the urethra, as, for example, the employment of concentrated solution for injections.

1. *The Direct Treatment of Acute Gonorrhœa*.—As every one knows, we can treat gonorrhœa either by direct applications to the urethra, or indirectly through the digestive organs. In the direct treatment, before all things, we must insist upon the patient wearing a suspensory, in order to prevent traction on the testes. He should take no beer or champagne, or any drink which contains much carbonic acid in the nascent state, as this gives rise to dysuria. Meat in the evening and late meals should be avoided, as favoring the occurrence of nocturnal pollutions, aggravating the patient's condition. The same may be said of the sitz-bath taken late in the evening. During the acute stage, if there still exist severe pain,



especially after passing urine, and stabbing pains at the posterior part of the urethra—one of the earliest symptoms of gonorrhœa,—we may confidently begin the treatment by the injection of a very weak solution of an astringent metallic salt. After the first effective injections the pains are considerably diminished, the urine is passed more easily, and the slight fever which is often present disappears. The relief of the pain may also be hastened by tepid sitz-baths. It is an interesting fact that the patient who at the beginning of the gonorrhœa can only pass urine amidst the severest pain is able to empty the bladder while in the bath with the greatest ease and comfort. With regard to the injections, they should at first be as weak as possible, so that they may never act as caustics, but only as astringents. The substance from which Professor Zeissl has derived the best results is the permanganate of potash, of which he prescribes two centigrammes in 200 grammes of distilled water, thrown in four times daily by means of a caoutchouc syringe, care being taken to prevent the entrance of air, the presence of even a small quantity of which in the urethra suffices to induce severe dysuria. If this occur, or pains arise in the testes, the injections must be suspended, and the symptoms suitably treated. As already stated, it often happens that after a few injections the pain diminishes, and all traces of the gonorrhœa frequently disappear after only a week's employment of the permanganate. If, however, after using this very weak solution for a week no essential improvement has taken place, it may be strengthened by a centigramme; but Prof. Zeissl never goes beyond fifteen centigrammes in the 200 grammes of water. A rule to be observed is not to continue the same injection for too long a time, as the urethra becomes accustomed to the presence of the medicinal agent, the further employment of which is then useless. Therefore, if the permanganate does not cause the disappearance or diminution of the purulent discharge after it has been employed for ten or twelve days, a weak solution (30 centigrammes to 200 grammes) of sulphate of zinc should be substituted, gradually increasing the strength to five decigrammes. If this does not succeed, Prof. Zeissl then resorts to the employment of insoluble bodies, such as bismuth, kaolin, or the acetate of lead, prescribing five parts to 200 either of bismuth or kaolin, or two parts of sulphate of zinc and two parts of acetate of lead to 200 of



distilled water. Injections containing these suspended bodies must be well shaken, so as to cause a uniform distribution of the precipitate in the urethra. This powder may remain in the urethra for a long period—and at all events until the next discharge of the urine; and when it is forced into the glandular orifices of the prostate it often remains there for a fortnight or longer. This circumstance explains the beneficial action of these suspended substances, as they remain in close and prolonged contact with the membranous and prostatic portions of the urethra and with the prostate itself—the part in which the catarrh exhibits the greatest obstinacy. After the injection of these substances, a circumstance is often observed which may cause the patient unnecessary alarm. When the injections have been employed for fourteen days or so, he may perceive, when discharging hard faecal masses from the rectum, that little granular bodies, adhering to each other by means of filaments, issue from the urethra. They can be broken up by the fingers, and are nothing else than portions of the bismuth or kaolin which had remained in the prostatic canals cemented together by the secretions of the prostate.

If, in spite of the means employed, some remains of the gonorrhœa still exist; if the urethra is found stuck together in the morning; or if, on syringing it out with clean water, this is found, when examined in a glass tube, to contain mucus filaments or epichelium,—it is then proper, besides using the injections, to introduce a gum-elastic bougie. For this purpose, Prof. Zeissl employs a conical elastic bougie of moderate size (from 10 to 14 of Charière's scale,) and having well oiled it and passed its end through a powder composed of starch, kaolin or bismuth, passes it into the urethra at least as far as the sphincter vesicæ, and allows it to remain there for five or ten minutes. From this procedure he has obtained highly favorable results in gonorrhœa which may have lasted for years. Nor has he ever met with any ill effect arising from it, or any consecutive disease (as the formation of stone) resulting, numerous autopsies having shown that the powder is not introduced into the bladder, but is all smeared over the urethra. When by the use of all these means a cure is not still effected, we may then resort to solutions of alum, tannin sulphate of cadmium, or acetate of zinc, and to the introduction of lithotomy sounds until the largest which

the urethra admits of has been attained. This last procedure will be again noted when treating on affections of the prostate consequent on gonorrhœa. The following are the formulæ which Professor Zeissl recommends :—*R.* Sulph. cadmii 30 centigrammes, aquæ 200 grammes. *R.* Alum. 5 grammes, aquæ 250 gr. *R.* Sulph. cupri 5 centigr., aquæ 250 grs. *R.* Acet. plumbi basici soluti 5 grammes, aquæ 200 gr. *R.* Acet. zinci 1 gramme, aquæ 250 gr. *R.* Acet. zinci, tannini puri, aa 50 centigr., aquæ 200 gr. *R.* Acet. zinci 70 centigr., tinct. catechu 1 gramme, tinct. opii gtt. x., aquæ 200 gr. *R.* Liq. ferri sesqui. soluti gtt. xx., aquæ 200 gr. Or urethral suppositories may be formed of equal parts of kaolin and glycerine, and used four times daily. When the subjects of gonorrhœa complain of very severe pains along the perineum, and especially in sitting down, either extract of belladonna suppositories (*R.* Ext. bellad. 7 centigr., butyri de cacao q.s., f. x. parva suppositoria) may be introduced into the rectum, or seven centigrammes of acetate of morphia may be added to any of the injections. Or again, urethral suppositories may be formed of seven centigrammes of muriate of morphia divided into ten. Professor Zeissl attaches great importance to the not having too early recourse to the more powerful action of the above substances, especially the sulphate of copper. His experience has taught him that if at the beginning concentrated and caustic injections are employed, they may give rise to very violent reaction; and in one case he met with, the whole of the mucous membrane of the urethra was discharged like the finger of a glove, accompanied by great hemorrhage, in consequence of using a concentrated sulphate of copper injection. So, also, violent pain and a great increase of the discharge were induced by an injection containing five grammes of the hypermanganate of potash in 200 of water. These examples, to which many others might be added, suffice to show that concentrated, and therefore caustic, liquids act very mischievously on the urethra. Further, it is a fact that, by the use of these injections, the disposition which gonorrhœa already possesses to induce stricture of the urethra is increased; and, indeed, caustic injections will often suffice alone to give rise to this affection.

2. *Direct Treatment of Chronic Gonorrhœa.*—By the term chronic gonorrhœa, Prof. Zeissl understands a disease of the urethra which

is limited to a small portion of the canal, most frequently quite its posterior part. There is only a spare sero-mucous secretion, and rarely slight pain, especially seated at the diseased portions of the urethral mucous membrane. Patients suffering in this manner must be asked whether the stream of the urine has latterly considerably diminished in size, for a similar chronic catarrh of the urethra will very frequently be produced by stricture. A sound (from No. 15 to 18 of Charrière's series) should be passed in order to ascertain whether the calibre of the urethra is narrowed. For those accustomed to the examination of the urethra, an elastic bougie will serve as well; but for those who have not had large practice in catheterism the sound is to be preferred, because with a solid instrument injury to the urethra is less likely to be produced than with an elastic one; while entanglement of this last in a fold of the urethra may lead to a diagnosis of stricture being made where none such exists. Very often the patient is able, on the introduction of an instrument, in too anxious a state of mind to be able to afford any exact information. Patients constantly complain of a painful sensation when the instrument passes over the *caput gallinaginis*. During the withdrawal of the instrument, even those who have had but little practice with it can easily detect irregularities in the urethra when they are produced by granular growths, small polypi, etc., and sometimes we are enabled to discover the diseased portion. Several methods have been devised for the direct application of medicinal substances to the small isolated diseased part of the urethra. Bougies or catheters on which such substances have been smeared, and syringes with catheter-like pipes, allowing the astringent fluid to be applied drop by drop at the posterior part of the urethra, are among these. The efforts which have been made to render the membrane of the urethra as visible as that of the vagina, and which have given rise to the invention of the endoscope, have not, in Prof. Zeissl's opinion been very successful. By its aid some interesting pathologico-anatomical facts have been established; but no material improvement in the treatment of prolonged gonorrhœa has attended the use of this instrument. Out of hundreds of cases in which he has employed the endoscope, Prof. Zeissl has only succeeded in effecting a cure in two instances by pencilling the diseased portion of the mucous membrane. He has

therefore well nigh given up this mode of treatment. He recommends that endoscopy should be practiced upon the cadaver, and especially with the straight endoscope, which requires great dexterity for its introduction.

The same method of treatment must be continued in the chronic as in the acute form of gonorrhœa, and the great majority of cases, it will prove successful. Especial advantage will be gained by the well-timed introduction of the elastic bougie and sound, which will be referred to again.

3. *Indirect Treatment of Gonorrhœa.*—It often happens that local means do not alone suffice in the treatment of chronic gonorrhœa, and then we have to supplement these by the use of medicinal substances acting through the digestive passages. Most of the substances thus employed, when introduced into the digestive organs, are excreted in the urine, and in this way act curatively on the gonorrhœa. Amongst those which are especially active in this way may be mentioned the balsams of copaiba and Peru, cubeb pepper, oil of turpentine, gurjan balsam, and matico. Recently the kava-kava or ava-ava has been strongly recommended for the treatment of acute and chronic gonorrhœa, but it has not succeeded in Prof. Zeissl's hands. On the other, preparations of iron have proved very efficacious. As to the question, when should these substances be commenced? A general rule can scarcely be laid down. In hospital practice, when the patient can be closely watched, recourse to them need be had but comparatively rarely; but in private practice the case is different. Patients wishing to pursue their occupations often neglect the injections for a whole day, or they perform them so unskilfully that not a drop of fluid enters the urethra. Under such circumstances we must have recourse to internal medicines. But it is also often observed that after continuing injections for days the discharge does not diminish, and continues very thin; while after the employment of some of the above-named substances for some time it lessens the quantity and acquires consistence. The opinion is frequently expressed that the employment of these resinous substances, especially copaiba, may give rise to albuminuria, but Prof. Zeissl has never met with an instance in the thousands of cases which he has treated by resinous substances. The opinion has indeed arisen through ignorance of chemistry. It has been

observed that, on the addition of nitric acid to the urine of a person who has employed these medicines, a white precipitate is produced. But this precipitate is again dissolved by boiling, which is not the case with a precipitate of albumen produced by nitric acid. Or if we boil the urine, slightly acidulated with acetic acid, or apply Hoppe-Seyler's sensitive test, no trace of albumen is seen to exist. Weikart's and Prof. Zeissl's experiments have shown that it is not the ethereal oil but uric acid that is precipitated by the nitric acid. These resinous bodies sometimes give rise to a form of urticaria (*U. balsamica*), but this soon disappears on discontinuing the remedy. The following formulæ are recommended by Professor Zeissl:—1. Matico in capsules (fifteen a day); 2. Ethereal extract of cubebæ and spirit of turpentine, equal parts, made into a pill mass with magnesia usta, of which twenty-four pills weighing each thirty-five centigrammes should be taken daily; 3. Copaiba 15 or 20 drops three times a day in capsules; 4. White wax 5 grammes melted by a general heat, balsam copaiba, 15 grammes, magnesia 9 grammes, to make a pill-mass, 8 pills of 30 centigrammes three times a day. Balsam of Peru, turpentine, and similar substances may be given in the same way. 5. Of preparation of iron, a teaspoonful may be given five times a day of a mixture containing  $1\frac{1}{2}$  parts of the liquor ferri, 150 of water, and 25 of syrup of raspberries; or 1 gramme of saccharated carbonate rubbed up with 3 grammes of sugar may be divided into ten powders, of which three are given daily. Prof. Zeissl has given a fair trial to an infusion of the kava-kava root, which is in fact the *Piper methysticum*, but has found it completely useless.

As already observed, not unfrequently neither the direct nor indirect treatment succeeds in effecting a cure, and then we have to resort to the use of bougies and sounds; the cause of this prolonged duration of the affection being the implication of the prostate. As Thompson remarks, most practitioners in treating gonorrhœa pay too little attention to the disease of the prostate which may be consequent upon this. Prostatitis in its acute form indeed is rarely overlooked, on account of the severe suffering that attends it. Very severe pains are felt in the perineal regions, especially on walking or when sitting, while a sensation is perceived as if the rectum were obstructed by a foreign body, and the passage of the fæces and of



the urine is rendered difficult. On examination by the rectum the prostate is found swollen and very sensitive : and if the inflammation goes on unchecked, in from the eighth to the twelfth day suppuration takes place. Generally the abscess so formed discharges itself, and usually during the ejaculation consequent upon a lascivious dream. If, however, there is violent pain with high fever and evident fluctuation, an incision must be made through the rectum for the pus ; but although Professor Zeissl has had many cases in which this operation has been performed with the best results, yet he has never had recourse to it except in the extremest need, as there is always danger of the healing process being impeded by the passage of the fæces. In very rare cases the prostatic abscess is discharged through the perineum, and a urinary fistula may then be the result.

Chronic inflammation is, however, a far more frequent occurrence than acute prostatitis. The symptoms in both forms are similar, except that the accompanying febrile action of the synochal type in acute, and more of the intermittent type in chronic prostatitis. The patients complain of a dull sensation in the perineum, especially when standing or walking, as also of pains in the sacral region and along the posterior parts of the thighs. The urine contains epithelial cells mingled with pus corpuscles and prostatic secretion. On examination by the rectum, the prostate is seldom found enlarged, but it is more or less sensitive to strong pressure. A patient in this condition may employ injections, and even those which contain a pulverulent deposit, for months, and yet not be completely cured. As already stated, such a case must be treated by the elastic bougie, or better still by means of a solid instrument. Choosing one corresponding to the size of the orifice of the urethra, we find, supposing there to be no stricture present, that we can pass it without obstacle on to the prostatic portion of the urethra. Arrived here, we are unable to pass into the bladder unless we employ considerable force—which is always to be avoided. An instrument of three or four numbers less will pass without difficulty into the bladder, causing during its passage through the prostatic portion not only the stabbing pain always felt on gliding over the caput gallinaginis ; but also a severe burning sensation along the entire prostatic portion. After the first introduction of a solid instrument there usually issue from the urethra one or more drops of a viscid



fluid mingled with blood-serum, and which is nothing else than the prostatic secretion combined with a little blood derived from the hyperæmic prostate. An instrument must be passed daily for several days, and after the second or third introduction a larger one will pass easily into the bladder. One rule should be observed in cases in which the passage is not effected easily over the prostate into the bladder—viz. : to greatly depress the instrument, when it will easily slip into the bladder. It is always preferable for beginners to employ a metallic catheter rather than a sound, as it is a source of great satisfaction to them to see the urine flow from the bladder, and not remain in painful doubt, during the four or five minutes the instrument ought to remain, whether it is actually in the bladder or has made a false passage. If this procedure be continued for some days, the patient observes, sometimes by day, but much oftener at night during sleep, that there is a considerable quantity of a viscous fluid discharged from the urethra, unaccompanied by lascivious dreams or erections and which leaves a sharply defined grey spot on his linen. This is a sign that the chronic prostatitis has come to an end. After each introduction of the instrument either some water or a very dilute solution of a metallic salt should be injected, in order to wash away any of the oil which may have become detached from the sound, as this induces a rather sharp burning sensation in the urethra.

By this mode of treatment a chronic gonorrhœa which has often persisted for years is cured in a comparatively short time. The secretion which appears at the mouth of the urethra in this affection arises not only from the small diseased spots of the urethra still uncovered by epithelium, but also at least in part from the prostate. By the introduction of the sound a sharper irritation is excited in the portions of the mucous membrane of the urethra suffering from chronic catarrh, and the moderately swollen prostate is at the same time submitted to compression, and in this way the symptoms which characterize chronic urethral catarrh are brought to an end. In Prof. Zeissl's opinion, chronic gonorrhœa never exists without a moderate tumefaction of the prostate, which, however, is not always perceptible to the sense of touch. In confirmation of the correctness of this view, it is to be observed that individuals who have very frequently had gonorrhœa, or in whom gonorrhœa has persisted for

a long period, are the subjects of a considerable enlargement of the prostate in their thirty-fifth year, and often even younger. This hypertrophy is the result of the hyperæmic condition which the prostatic portion of the urethra and the prostate itself are in during the existence of chronic gonorrhœa; and we all know that an organ to which for a long time a very large supply of blood is conveyed becomes hypertrophied.—*Medical Times and Gazette*.

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### POISONING BY STRAMONIUM SEEDS.

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Dr. Ströhmberg (*Petersburg Med. Woch.*, December 13) relates that four children, from three to seven years of age, were brought into his hospital having eaten a great number of the seeds of the *datura stramonium*, which were in a completely developed condition, although not ripe. In all the children the pupils were greatly dilated, the face very red, and the pulse much quickened, and they were all unable to walk. Two of them sat silent and trembling, while two others from time to time uttered screams and suffered from severe clonic convulsions; and all but one were unable to understand or reply to questions. The stomachs of all the children were thoroughly washed out, and in only one of them, five years of age, did the subsequent symptoms excite alarm. In this child the surface was dry and hot, and the pulse very rapid and filiform. The entire voluntary muscular system was so affected by constant clonic convulsions that the child had to be held in bed. The eyes were wide open, with excessively dilated pupils, and there was complete unconsciousness. After a time the breathing became stertorous and the pulse irregular. The child being in imminent danger, it was resolved to try the antagonistic effect of morphia, and one-tenth of a grain of the acetate was administered, and in the course of an hour the child took a third of a grain—that is the maximum quantity for twenty-four hours at this age. No sleep was produced, but the symptoms gradually abated and complete recovery ensued.—*Medical Times and Gazette*.

## EDITORIAL.

### NORTH CAROLINA MEDICAL JOURNAL.

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### MONTHLY BULLETIN OF THE NORTH CAROLINA BOARD OF HEALTH.

Since the organization of the Medical Society of North Carolina, there has been an effort made at every session, in some shape or other, to obtain yearly reports of the climate, topography and diseases of counties. It will also be remembered that the reports made have been of little permanent value, with one or two exceptions. This failure has been due to the voluntary character of the work, and the consequent lack of uniform method.

The truth is that there is no more difficult undertaking than the erection of the machinery for the collection of vital and economic statistics. The success in all such work is due to elementary preparation and a thorough conviction of the necessity of the effort. The medical profession must first awake to the fact that without the possession of honestly compiled statistics that good work in preventive medicine will not be accomplished, and being so awakened their influence must extend throughout the area of their professional bounds.

It is no wonder, therefore, that the efforts so far made by the State Medical Society towards a system of reporting have had no good result, and we will be very fortunate if the failures of the past have not caused apathy and indifference on the part of some of the movers in the work.

Some years have elapsed since the incipient movement commenced by the introduction of a resolution praying the Legislature to make a uniform State law on the registration of marriages, births and deaths, and to-day we are enabled to issue a monthly bulletin of diseases, and of the internal economy of our counties. In the first bulletin we have the reports of 26 counties, as many as six reports having reached the Secretary too late for insertion. An examination of these reports will show what the Secretary felt able to undertake thus early in the organization. It must be borne in mind too that the powers and means remain the same as at the organization of the board, and that two hundred dollars a year is the sum total of money appropriated to carry on the work,—a sum it is hardly necessary to say which does not cover the amount spent by the Secretary for postage alone.

In consideration of all the difficulties,—the newness of the work, the imperfection of the law, the lack of experience of Superintendents and Secretary, the lack of conviction on the part of the body of the profession and the lack of money,—the outcome is far from discouraging.

It has been attempted, and with what lack of success none are more correctly impressed than the executive officer of the Board, to show at a glance the population, the weather, the prevailing diseases, the epidemics. Of the prevailing diseases it was not thought necessary to mention any but those dangerous to the public health. The diseases of domestic animals it was thought very proper to add, both in an economic and pathologic aspect; for the loss of domestic animals has been great to the State, and the prevention therefore a matter of grave concern in some counties, and the connection between the diseases of the human family and our domestic animals is yearly becoming understood. The condition of our public charitable and penal institutions, is a fair index to the stage of civilization we have attained; and the care of the sick in the poor house, work house and jail, devolving upon the County Superintendents

of Health, it was considered highly important that the public should know how such institutions were managed, as regards hygienic surroundings.

The condition of public schools too, has been very properly added, and it is hoped that the report of private schools will be included as the work goes on.

As meagre as this work is acknowledged to be, it is the first attempt made in any State in the Union towards a general system. It is true that Michigan has a bureau of vital statistics, and that it is managed as only the best statistician in the country can manage it, still no State has attempted to inform the public monthly upon all the topics brought together in this Bulletin. That this work will be excelled even in North Carolina is confidently expected, and the only apology for any allusion to its character here is, to point out frankly its defects, to state its highest aims, and ask the support and sympathy of the body of the profession.

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## INSANE ASYLUM FOR COLORED PEOPLE.

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We are glad to be able to announce that the asylum for the insane colored people is so nearly ready for occupancy.

This building is located two miles west of Goldsborough, on a beautiful hill about twenty-five feet high. It presents an attractive view from the North Carolina Railroad, which runs about a half mile in front of it. The main building is almost a square, being 44x46 feet, with a passage running through it. The wing annexed running south is 156x38 feet. The whole building is three stories and an attic high. The pitch of the first story is fifteen feet, the second, twelve feet two inches, the third, twelve feet.

The arrangements of the rooms and cells on each floor are precisely alike. The hall running the entire length of the wing is fourteen feet wide. There are two bath rooms, with water closets on each floor for patients. There are 34 rooms to each floor in the wing, and 4 to each floor in the main building. The cells are 7x10 feet in the clear. There are reception rooms, attendants rooms,



dining room and pantry on each floor, averaging 12x16 feet. The rooms and cells are all ventilated by registers opening in the hollow walls, extending to the attic story. There are four large ventilators opening on the roof, ventilation being assisted by means of a fan driven by an engine. The whole building is warmed by steam, and lighted with gas. Water for drinking and cooking purposes is procured from two cisterns with a capacity of 30,000 gallons.

Four officers have been elected by the directors. Dr. W. H. Moore, of Goldsborough, was made Superintendent. Of the two matrons one is colored.

The above account was kindly sent from Goldsborough by a friend there. More complete particulars will be given at some future time.

We hail this humane beginning with unusual pleasure. Insane patients have been increasing in large numbers of late years, and there is hardly a county in the eastern portion of the State which has not one or more colored people confined in the jail or poor house. The condition of these people has been very pitiable, especially as regards the violent ones. Often they have been confined in cells, unventilated and reeking with filth, making night hideous with their screaming and wailing.

We are glad to know that many counties will be relieved of the disgrace which the old state of things brought upon them.

We wish to call the attention of the directors of this asylum to a clause in the Board of Health law, which is as follows: "They [the North Carolina Board of Health] shall be considered the medical advisers of the State, and are herein specially provided for, and shall advise the government in regard to the location, sanitary construction and management of all public institutions." \* \* \*  
—(Extract from the State Board of Health Act, ratified March 14, 1879.)

We learn that the Board of Health have not been consulted as to any of these matters, and we doubt if the text of the law is familiar to any of the gentlemen interested, and this we infer because the law is very little understood, and still less appreciated by our officials in general.

We are satisfied from the beginnings, that this institution will be an honor to the State. We think it was a very wise conception,

which [subordinated architectural finish, to the comfort of the inmates, and we will be greatly disappointed if we do not get as good results from this hospital as from the one at Raleigh.

We have suggested the idea once before but it is sufficiently important to repeat : Why is it not feasible in each insane hospital now, to have assistants, selected by competitive examination from among the licentiates of the State Board of Examiners, to serve upon a nominal salary, that the vacancies in our asylums in the future may be filled by well-trained men ?

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## INDEX MEDICUS.

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This valuable journal commenced its second year with the January number.

Where but in America, at Washington and under the trained hand and eye of Dr. Billings and Dr. Fletcher, and with the National Medical Library at command, could such a serial be compiled ? The faint praise of it we see in English medical journals is irritating, and the lack of appreciation of it by our American doctors does not speak well for their training as students.

When the New Sydenham Society issued "The Medical Digest" by Dr. Neale, the work was received with grateful acknowledgement by scores of literary men who up to that time had been relying upon their memory, and their own manuscript memoranda. The "Digest" was a key to the principal contributions to medical science for thirty years, arranged for ready reference, and since then students have felt the necessity of having a continuation and completion of a similar index.

This we have in the "Index Medicus." There has been nothing like it before, and if the medical profession withhold their support they will see the last of this work ere long. No doctor is studying standard and periodical literature to the best purpose who does not consult "Index Medicus."

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"John Hunter was to physiologists what Columbus was to geographers."—Waterhouse.

## REVIEWS AND BOOK NOTICES.

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THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.  
Vol. xxx. Collins, Printer. 1879. Pp. 1027.

This portly record of the thirtieth annual meeting of the American Medical Association, comes to us in better season than former volumes. Enough time is left to digest its contents before the New York meeting in June.

Some of the papers contained have been seen by our readers before, the President's address particularly having had a considerable circulation. A second reading of it only confirms our first impression that Dr. Parvin is a medical scholar of the very highest order. The pleasure of this reading is in no small degree heightened by the recollection of the graceful manner in which it was delivered.

Prof. Thomas F. Rochester, of Buffalo, N. Y., delivered the address in Practice of Medicine, Materia Medica and Physiology. He gave a review of the epidemic of yellow fever in 1878, directing particular attention to preventive measures in the future, urging in conclusion a guarantee under the authority of a National Board of Health with extraordinary powers for emergencies. The other topics treated by him were "How Typhoid Fever is Propagated," and "Sanitaria for the Treatment of Phthisis Pulmonalis."

The review of Materia Medica covers chiefly the ground of new anæsthetics. He remarks: "A new anæsthetic has been presented by Dr. George E. Sandford, of Cayuga County, N. Y. He calls it *chloramyl*. It is composed of Squibb's chloroform, 1 lb., nitrite of amyl, 2 drachms." "The combination is certainly worth trying, with the suggestion—which, it is hoped, will be taken good naturedly—that chloroform is quite as necessary as an antidote to the amyl as the amyl to chloroform."

Under the head of Practice of Medicine, Dr. N. S. Davis, of Chicago, gives a report on the "Prevention of Bowel Affections, both in Children and in Adults," &c., in which he confirms the already tolerably well attested fact that prevalence of the diseases is due in a great measure to continued high temperature. The only question that remains unsettled is, whether the persistent high temperature, occurring in the regions already indicated, acts as a *direct*

*exciting* cause, \* \* \* or *indirectly* by changing the electric and ozonic conditions of the atmosphere."

Dr. Charles A Dennis, of Denver, Colorado, contributes a paper entitled "Experience of Consumptives in Colorado, and some of the Aero-Hygienies of Elevation Above the Sea, with Conclusions," which is well worthy of preservation.

"Plastic Bronchitis" by W. C. Glasgow, M. D., of St. Louis, and "Inflammation of the Hair-Follicles of the Beard," by John V. Shoemaker, M. D., of Philadelphia, are both interesting papers, the former more especially.

"The paper on "Veratrum Viride," by G. F. Cooper, M. D., of Georgia, ought certainly attach renewed interest to this old remedy, and we are pleased to notice that many physicians have recently contributed new knowledge to our stock, and veratrum viride will again be reinstated as a standard. More especially is the antagonism of opium with this drug a point which should be definitely determined clinically and in the physiological laboratory.

The ever-active section of "Obstetrics and Diseases of Women" fell far short of the expectations of the Association at Atlanta. We know this does not mean that this department of medicine is on the decline, for the excellent work done in the Gynæcological Society would contradict this. It is useless to disguise the truth of the case, that the far-reaching attempts at Atlanta for something new in the department of gynæcology were rather ludicrous. Progress is as much dependent upon thoroughly studying and inculcating well-known principles, as in puzzling the brain over new surgical devices. It seems to us the pessary question has now been brought to a point beyond which it is not safe to go, and escape ridicule.

The Section of State Medicine and Public Hygiene was especially interesting to the great body of the Association.

The address of Dr. John S. Billings in "State Medicine and Public Hygiene" has a directness and frankness about it that at once convinces the reader that he is in earnest. It is not always comfortable to read what Dr. Billings says about the progress of sanitary science and art, simply because he does not flinch from saying with emphasis some unpalatable truths. He is not one of the enthusiasts who looks for the victory of our sanitary movement in the near future, he would be content if the entire medical profession

would compactly organize, and patiently and faithfully work out the problem. His powers of organizing and directing have been evident from the very first, and his selection as President of the American Public Health Association is a compliment to these very eminent abilities. Let every sanitarian read and consider this address, and awake to the profound issues upon which the future of the movement depends.

"The Regulations of Medical Practice, by State Boards of Health, as Exemplified by the Execution of the Law in Illinois," when read, attracted very much attention from those gentlemen residing in States where there is no licensing body.

One of the most notable papers in this volume is that by Prof. Stanford E. Chaillé, M. D., of New Orleans, on "State Medicine and State Medical Societies."

The earnestness and vehemence of the speaker when delivering this address will long be remembered. It is a new field, and goes to foundation of professional organization. It cost Dr. Chaillé a great deal of labor to get the material for his address, and it will long be referred to as the best available means of information on the topics recorded. We think, therefore, that some items contained in it, so far as they relate to North Carolina, should be corrected.

This State had in 1801 an authorized licensing Board as stated in the notes appended to this address. In 1859 a law was passed creating a board of "Medical Examiners," and with the exception of the interruption caused by the war, the work done by this board has been active and satisfactory. It is very decidedly more than "old law still unrepealed;" it is a living, energizing body, recognized and upheld by the profession of medicine throughout the State, and it has done more to improve the professional tone in the State than any other agency. It has since its organization licensed a large number, and at its last session examined 43 applicants.

Another statement of Dr. Chaillé's at which we take exception is that "the present Society admits doctresses." It is true that a "doctress" was admitted as an honorary member, but it has never been, nor do we believe it can ever be, a rule of the Society to admit women. In the case referred to, both law and usage were disregarded, and by a majority of one or two, a female physician was elected to honorary membership. Her unfortunate death seals up



this avenue to distinction, in our opinion, through the Medical Society of North Carolina. Perhaps we are unduly sensitive about these matters, but we are not envious of the distinction of breaking down the natural professional barriers, or of promoting such a retrogressive innovation.

Dr. Chaillé has made a movement in the right direction, and his suggestions for a concentration of the scattered energies of County and State Societies, will materially hasten the consummation of uniting all the bodies medical, into a homogeneous whole.

In the Section on Ophthalmology, Otology, and Laryngology, the most satisfactory work presented, was Dr. Knapp's masterly review of Ophthalmology and Otology, of which the printed paper seems to us as only a condensation.

Nearly one-third of the volume is taken up with the Surgical Work. This Section is always the most interesting, but the Atlanta proceedings seem to have quite eclipsed everything but the work of the Section of State Medicine.

From the address of Dr. Moses Gunn, Chairman of the Section, to the elaborate report of Dr. Sayre on the "Treatment of Spondylitis by Suspension and the Plaster-of-Paris bandage," The papers are good, and deserve an extended notice which we have not the space to give them.

The report on "American Necrology, 1879, by J. M. Toner, M. D., is done with pains-taking peculiar to the great biographer himself, and he has had the valuable assistance of others. It includes sketches of nearly seventy persons, and embraces nearly one hundred pages.

The volume closes with the Prize Essay, entitled "A Consideration of Certain Forms of Primary and (Local) Secondary Degeneration of the Lateral Columns of the Spinal Cord, with Especial Reference to an Infantile Rare Form," by Allan McLane Hamilton, M. D. We hope to return to this essay in a future number.

Taken as a whole, this volume is above the average of the series, and the comparative promptness with which it has been published makes it all the more valuable.

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VACCINATION TRACTS. Preface and Supplement. William Young, 8 Neeld Terrace, Harrow Road. London. 1879.

The above is a title of a little duodecimo issued by the anti-

vaccinationists in England, sent to us with the Editor's compliments.

We have carefully read this volume, and all the tracts sent us from this source, and cannot help coming to the conclusions :

That compulsory vaccination has nettled a class of English men who seem to think it of little consequence how they put in their protest. The consequence is that Sir Thomas Watson and Mr. Jonathan Hutchinson and our own Dr. Henry A. Martin are made to say things about vaccination which they could not possibly have said, and to speak plainly, lies are given a currency in these tracts in a most shameless manner.

A more persistent and determined wrong-headedness seems never to have possessed an intelligent community, than that organized by the anti-vaccinationists. In their tracts they openly advise mothers to go to adjoining counties before the birth of their children that the proper officials may lose all track of the new-born when they return. They also, with criminal cunning, advise that "tartar emetic" "produces a vesicle and leaves a cicatrix scarcely distinguishable from those described and illustrated by Jenner in his 'Inquiry'" "One medical man," the tract goes on to say, "residing in a fashionable metropolitan suburb, has for years given babies, brought to him for vaccination, the lymph as a dose of medicine, and filled up the certificates [of vaccination] in the usual way." It is then explained that allusion is here made to *homoeopathically prepared vaccine* !

We know that these people desire nothing more earnestly than a notice, and we would have refrained from saying what we have, but that we felt it necessary to make the record for the purpose of warning our people against imitation. If our knowledge of the protection afforded by vaccination is not a certainty, we had as well burn all our books and abandon the human family to its fate.

What our English friends need now to extricate themselves and silence the dishonest objectors to vaccination, is to substitute animal virus.

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COLOR-BLINDNESS : Its Dangers and Its Detection. By B. JOY JEFFRIES, A. M., M. D., (Harvard) &c. Houghton, Osgood & Co. 1880. Pp. 316.

We have had a great deal lately about color-blindness, as our

readers will remember. We gave them the articles by Dr. Wolfe, V. 3, p. 295 and 368, which fairly put the matter in its advanced stage before them. Now we have an elaborate work by Dr. Jeffries who is well known to have devoted a great deal of study to it, and the Legislature of Massachusetts has been invited to pass a law for the examination of a certain railroad and other employés who have to do with cautionary signals.

The Marine Hospital Service has adopted certain regulations looking to an examination of the capacities of pilots and others as regards the discrimination between colors.

We do not wish to be captious in our opinions about a work that has engaged the attention of Holmgren, Wolfe, and Jeffries, but according to our way of thinking, rather too much stir has been made about the frequency and dangers of color-blindness. And if color-blindness is so apt to go undetected, it would be much more to the purpose to change the methods of signalling to a code that would be easier to detect by common mortals. We can easily conceive that an engineer might not know the color of the brasses about his engine, or even be able to point out the various colors on his engine cab, and yet be a cool-headed fellow who would serve the railroad employing him more acceptably than another man who knowing all the hues of the rain-bow had not caution, a quick eye, and ability in an emergency.

What we object to most is, that there is a constant tendency among specialists to draw very fine points, on matters that are microscopic, and by constantly dwelling on them, little things grow to be of great importance. This is not only true of eye specialists, but others also.

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PUBLIC HEALTH REPORTS AND PAPERS. Vol. IV. Presented at the Meetings of the AMERICAN PUBLIC HEALTH ASSOCIATION. In the years 1877-1878 with an Abstract of the Record of Proceedings. Boston : Houghton, Osgood & Co. Riverside Press. Cambridge. 1880. Pp. 391.

The body which issues this elegant volume has in two years risen to an importance hardly dreamed of by the founders of it. What they were striving to gain by slow approaches, was accomplished by a sudden and great emergency. "Broad and progressive as the

purposes and methods of the Association were at the outset, the events of the six years have traveled more rapidly than our thoughts; and it now appears that the hopes, purposes, and coöperative spirit which recently seemed limited to a small number of workers in the fields of public hygiene have come to be shared by thousands.—*Secretary's Introductory Note.*

An examination of the contents of this volume, covering the work of two annual meetings, shows how earnest has been the efforts of this select body of men, and how broad their range of study. With the exception of the American Gynæcological Society, perhaps no body of men in the country have given such indications of proper preparation of the members.

The second part of this volume will attract the most attention, as representing the activity of the sanitarian mind just after the great epidemic of yellow fever. Among the most noteworthy of these contributions may be mentioned an address by Dr. Elisha Harris, of New York, on the "Significance of the Recent Epidemic, Duties of the American Public Health Association"; "How to Study an Epidemic," by Dr. Ezra M. Hunt, of New Jersey; "History of the Importation of Yellow Fever into the United States from 1693 to 1878," by Dr. Choppin, of Louisiana; "Yellow Fever as it Existed in Chattanooga, Tenn. Its Origin, Progress, and the Probable Remedy for its Abatement in the Future," by Dr. J. H. Vandeman, of Tenn.; "The Quarantine at Little Rock, Arkansas, during August, September and October, 1878, against the Yellow Fever Epidemic in Memphis and the Mississippi Valley," by Dr. R. G. Jennings, of Arkansas; "On the Geographical Element in the Etiology of Yellow Fever, and its Bearing upon Prevention," by Dr. H. Hartshorne, of Pennsylvania; "The Epidemic of 1839," by Dr. W. G. Austin, of New Orleans, La.; "Is Efficient Quarantine Possible or Practicable?" by Dr. D. C. Holliday, of La.; "Memorandum Concerning the Refugee Cases of Yellow Fever in Philadelphia in 1878," by J. Howard Taylor; "Report on Yellow Fever in Nashville, Tenn., September and October, 1878," by Dr. J. Berrien Lindsay, of Tenn.; "History of the Epidemic in Baltimore in 1876," by Dr. John Morris; "A Study of the Yellow Fever Epidemic of 1876, as it Effected the State of Georgia," by Dr. Ely McClellan; "Views on the Subject of the Prevention of Yellow Fever," by Dr. William Selden, of Virginia, &c., &c.

The transactions of American Public Health Association have a permanent value, as books of reference for the coming generation of sanitary officers, and the attractive style in which they are issued adds to their value.

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SORE THROAT; ITS NATURE, VARIETIES, AND TREATMENT; INCLUDING THE CONNECTION BETWEEN AFFECTIONS OF THE THROAT AND OTHER DISEASES. By PROSSER JAMES, M. D. Fourth Edition. Illustrated with hand colored plates. Philadelphia. Lindsay & Blakiston. 1880. Price \$2.00.

One must not be misled by the title of this book, and pass it by as a popular treatise. It should have been dignified by a more worthy title, as it is really a meritorious volume, and deserves it. It has reached its fourth edition, "the third edition having been sold in little more than three months." Four entirely new chapters have been added to this edition, and new illustrations colored by hand have been substituted for the old illustrations.

Dr. James does not agree with Dr. Morell Mackenzie on the identity of croup, and diphtheria. He says :

"While, then, we cannot point to any anatomical differences between croup and diphtheria, the two affections form sufficiently clear clinical groups to warrant us in speaking of each separately."

He says of tracheotomy in croup : "It is when the air passages are implicated, that the propriety of tracheotomy must be mooted ; but much as the success of this operation seems to depend on the opening being below the seat of exudation, it has undoubtedly saved life where this was not the case. No one would open the air-tube unless the impediment to inspiration seemed likely to be fatal. The operation can have no power to prevent death by asthenia. But there are many cases in which tracheotomy offers an additional chance of life." \* \* \* \* "It should be observed that tracheotomy fulfills only one indication, and that besides the necessary after treatment, which is of vital importance, other measures are to be employed with the same diligence as before the operation. It is also possible to apply local remedies through the tube." Notwithstanding the fact that we have had excellent treatises on this same subject quite recently, this little volume will not fail to satisfy the requirements of the general practitioner.



THE THERAPEUTICS OF GYNÆCOLOGY AND OBSTETRICS, Comprising the Medical, Dietary and Hygienic Treatment of Diseases of Women. As set forth by Distinguished Contemporay Specialists. Edited by WILLIAM B. ATKINSON, A. M., M. D., &c., &c. Philadelphia: D. G. Brinton, 115 South Seventh Street. 1880. Pp. 365. Price \$3.00.

We have noticed before the works of this series, of which this is the third. In this volume has been brought together the current opinions of the most eminent authorities on the subject of treatment of diseases of women. In no department of medicine has there been such great energy displayed in multiplying new remedies and in devising new modes of procedure. If a record of all this huge mass is worth nothing else it will be valuable to students a few years hence to show what could be done to a sick woman. Much of the matter of this volume ought to be mercilessly condemned, and will be probably, by the next generation. This is no fault of the editor, for his work bears evidence of patience and honesty. The literature of the world has been so carefully culled that those readers of medicine whose sole aim is to cure their patients without the preliminary of diagnosis will be satisfied with it. When we reviewed the companion volumes on Medical and Surgical Therapeutics we were satisfied that the editor had put a large mass of matter within the reach of that very large class of physicians who would rather take a quotation at second hand and run the risk of its virtue being lost by "editing" it, than do the drudgery of reading the original. We do not see how this class of physicians can well afford to be without this work, and physicians of very extensive reading will go with a vast deal of satisfaction to its pages for consultation. The busy doctor who comes into his office wearied and worn by a hard day's work, with dull brain and anxious heart, will be very thankful for well arranged information over which he can run without additional fatigue.

The publisher, Dr. Brinton, has shown sagacity and business knowledge in his venture, and has followed out the idea of a retrospect in a way that we have heard our seniors of the past generation long for. Many attempts have been made in this direction before, but none so successfully as the therapeutical series now under consideration.

THE HYPODERMIC INJECTION OF MORPHIA. Its Advantages and Dangers. Based on the Experience of 360 Physicians. By H. H. KANE, M. D. New York: Charles L. Birmingham & Co. 1880. Pp. 354.

The basis of this book so far as it relates to the method of employment, and the general experience as regarded the action of hypodermic injections of morphia, is the result of collected opinions of 360 physicians. Dr. Kane has used the material to good advantage, and has made a valuable addition to the literature of hypodermic injections. We cannot help being impressed, however, with a feeling that a much better book would have resulted if more time had been taken in its preparation, and a more thorough digest had been made of accessible material.

The history of the discovery, description of the instrument, advantages of the method, and the doctrine of localization are treated of in the first chapter. Inflammation and abscess, the solutions used, method of injecting, resulting erysipelas, cysts, transmission of syphilis and carcinoma, the second.

The chapters which will probably attract the most attention are Chapter IV,—Injection into a Vein, Alarming Syncope, Death, Rapid Absorption, and the Use of the Tourniquet; and Chapter VI on the Treatment of Opium Narcosis.

With a view, we presume, of adding still further to this volume, Dr. Kane propounds the following questions to the profession:

1. In how many cases of delirium tremens, in what doses and with what result have you used morphia hypodermically?
2. Have you used the drug in this manner in acute inflammatory affections of the respiratory organs?
3. Have you used it in acute or chronic renal disease, with what result?
4. Do you know of any deaths due to the subcutaneous injection of morphia? If an autopsy was held please state the result?
5. Have you had any serious case of narcotism from the use of morphia in this manner? If so, please state the condition of pupils, number of the respirations and pulsations, the amount of morphia used, whether there was any known or organic disease, and whether there was an optimum idiosyncrasy.
6. Have you had any cases where the drug was thrown directly into the blood? What were the symptoms and what was the treatment?
7. In what diseases have you used this method of administering morphia, and with what results?

## CURRENT LITERATURE.

### MEDICATION BY THE RECTUM.\*

“The history of enemata goes back at least to the times of the ancient Egyptians, who, as Herodotus testifies, had a custom of using emetics and clysters three days in every month for the purpose of preserving their health. The Greek physicians made great use of clysters in the the treatment of the fluxes, particularly in dysentery and cæliac flux, preferring this method to medication by the mouth whenever they supposed the morbid process to be seated chiefly in the large intestine. Sometimes they injected whey, milk, ptisan, broth of spelt and the like, intending thus to wash out acrid humors from the bowel and favor the efforts of nature to evacuate them; sometimes they aimed to sheath the intestinal mucous membrane, and protect it against acrid humors descending from above, by injecting oleaginous and gummy substances; or they endeavored to check the flux by injecting astringent decoctions of various kinds, and to allay pain by clysters containing opium, hyosciamus and other narcotics; finally, in ulcerative dysentery, and in the cæliac flux, they essayed to stimulate the intestinal ulcers to cicatrization by enemata containing various styptic and escharotic mineral substances, such as alum, the scales and oxide of copper, quicklime and the native sulphurets of arsenic. These more potent substances appear to have been avoided by Celsus, but the Arabians adhered to this respect to the Greek practice, which survived the middle ages and are still found defenders as late as the sixteenth century.

“About this time, however, a prudent opposition to the employment of enemata of caustic or corrosive substances began to make

\*An extended abstract of the article of Dr. J. J. Woodward from the Second part of the “Medical and Surgical History of the War,” &c., (pp. 825–836) given above, will give some idea of the exhaustive manner in which all the work is done. The extensive foot notes in the smallest type are necessarily omitted, but no student who desires to acquaint himself with the earliest development of treatment, and follow it down to within a very late date, can afford to pass by this the most valuable part of the work. The developing stage of the metallic enema apparatus, figures of which are given from the works of Marcus Gatinaria dated from 1525 to 1604, bear a nearer resemblance to the cow’s-horn clyster tube said to be used Kaffir’s than the modern instrument. There are numberless extracts and references from the rarest of medical works that cannot fail to be appreciated by students who do not enjoy the civil eyes of an intimate acquaintance with the National Medical Library.

itself felt. Roudeletius held that the practice of the ancients in this respect should not be imitated, for orpiment, quicklime and the like must act as caustics to the intervening surfaces of the intestines, as well as to the ulcers. His views were shared by Felix Plater, Forestus, Hildanus, Septalius and Sennertus. Hildanus pointed out that gangrene is produced by external application of arsenic, and indignantly asked what else was to be expected if it be applied to so delicate a surface as that of the intestines. These physicians used in dysentery emulcent clysters of barley water, syrup of roses, yolks of eggs and other bland substances, to which, while the pain was acute, they added opium or other anodynes, and in the advanced stage relied on decoctions and infusions of the vegetable astringents, to which they sometimes added burnt hartshorn, Armenian bole and other drying remedies, or mastic, frankincense, and other resinous drugs, believed to be possessed of healing virtues.

“Zocentus Lusitanus vainly attempted to combat the new views, declaring that it was better to inject even quicklime and arsenic than to let the patient die. His protest failed to check the general treatment in the direction of reform; indeed, objections began to be heard even against the more innocent enemata which still continue in use. That wild enthusiast Van Helmont directs one of his wildest diatribes against this mode of treatment, and although his followers were by no means numerous, yet even among other physicians clysters now began to be indiscriminately employed. E. H. Müller declared by their abuse injurious effects were often produced; Hoffman counselled caution even in the use of milk, gum, gelatine and the like, insisting that, instead of benefiting the patient, they often made the disease worse; Van Swieten held that the quantity of fluid injected ought never to exceed three or four ounces; while Degner went still further, and boldly affirmed that clysters were unsuited to the treatment of dysentery.

“It is true that this extreme view did not long maintain its ground; nevertheless during the last century and the beginning of the present, physicians were for the most part cautious in the use of clysters for this disease. Zimmermann countenanced only the sparing use of infusions of chamomile or other bitter herbs and flowers, and expressed the opinion that clysters containing laxative, emollient and fatty substances are injurious. Fournier and Vaidy

admitted that emollient clysters are indicated in dysentery, yet thought that, unless great dexterity was employed in administering them, the irritation produced by the introduction of the clyster-pipe, counter-balanced any advantages that might be expected. Even during the last century, however, anodyne injections enjoyed a certain degree of popularity, and since the commencement of the present century there has been a general revival of medication by the rectum in dysentery."

*Anodyne Clysters.*—Enemata containing some preparation of opium were, very commonly employed in ancient medicine, and *suppositories* containing opium, with or without astringents, were frequently employed by both Greek and Arabian physicians for the same purpose. Enemata containing narcotics in the fluid form were countenanced in most of the works on dysentery published in the sixteenth and seventeenth centuries.

"Sydenham commonly administered clysters of milk and theriaca, regarding them of wonderful efficacy in checking the motions. Pringle used emollient clysters to which he added 20 to 50 drops of laudanum. Donald Monro declared that opiate clysters often gave more relief than anodynes administered in any other way. Since then such injections have been commended by Blane, Hunter, Ballingall, Bampfield, Cheyne, Abercrombie, Annesly, Twining, Bankier, Hauff, Baly, Austin Flint, Bamberger, Morehead, G. B. Wood, Aitken, Savignac, Barrallier, Heubner and many other physicians.

"Nevertheless certain disadvantages which have been conceded even by their advocates, attend the use of these enemata. Not infrequently the condition of the anus is such that even the most careful introduction of the clyster-pipe provokes serious irritation, and although the quantity of fluid injected be restricted as much as possible, its presence in the rectum often provokes a reflex action by which it is promptly expelled, so that the effect of the operation is to increase the local irritation. Moreover, the enema is so frequently expelled before the anodyne dissolved in it can be wholly absorbed that the physician must always feel a degree of uncertainty as to how much of the drug he is introducing into the circulation.

"These considerations have led many physicians, among them



such skilful practitioners as Vogt and Niemeyer to regard the use of all clysters with distrust. Tripler testified that anodyne enemata were apt to become of themselves sources of irritation and to aggravate the sufferings of the patients, and Stillé entertained serious doubts whether enemata are ever useful in the acute stage of dysentery. These objections, combined with the obstacles to this mode of medication usually encountered in the military service, served to limit the employment of anodyne enemata during our civil war. They are mentioned with favor by a few of the reporters; but the testimony presented is not sufficient to throw much light on the question of their real utility. For myself, while I do not doubt in the least that they are very often of apparent, and sometimes of real benefit, I think it probable that all the good they are capable of doing can be obtained with greater certainty by the hypodermic injection of morphia, and anticipate that with the exclusion of the latter mode of medication they will disappear from practice.

“*Astringents and Drying Clysters.*—Infusions and decoctions of the various *vegetable astringents* continued to be occasionally employed as enemata in the later stages of acute dysentery and in the chronic fluxes. They were regarded with favor by Annesley, Bumberger, Savignac, Barrallier, Heubner and others, and are usually administered in combination with some preparation of opium, but have not, during the present century, enjoyed the popularity of some of the substances of the group next to be mentioned. Among the *mineral astringents* that have been used as clysters, alum, the astringent salts of iron, the acetate and subacetate of lead, the sulphates of zinc and copper and the nitrate of silver may be particularly mentioned; each has had its advocates, but the last named has enjoyed by far the greatest popularity.”

After reviewing the use of injections of nitrate of silver solution from the time of their suggestion by Robert Jackson in 1817 to our late civil war, he adds :

“In incline to the opinion that the praise lavished by some writers upon this mode of medication is hardly warranted by the clinical details that have been reported; and although it is not surprising that the introduction of such a styptic into the rectum should sometimes, temporarily at least, check the flux, it is difficult to believe that the small quantity of solution usually injected is likely

to reach the ulcerated surfaces that may exist in any part of the colon." This difficulty was overcome in a certain measure by Hare, who injected a strong solution through a tube passed beyond the sigmoid flexure. Some success has followed the cantherization through a speculum, of ulcers near the anus, which have kept up fluxes. "Walsh cured a case in this way in 1848, and the method has since been employed with good results by Kennedy, Taylor, Maury and Dills, while T. Gaillard Thomas has successfully used pure nitric acid in the same manner."

Of the *drying remedies* the *subnitrate of bismuth* is the one which has attracted most attention in modern times; but it is so easy to bring this insoluble powder in contact with all parts of the canal by administering it by the mouth, that it can hardly be necessary to employ it by the rectum.

*Iodine clysters*, first employed by Eimer; but Vogt who subsequently gave the matter a fair trial, and found that weak solutions were inefficacious, while strong solutions actually served to make the disease worse.

*Ipecacuanha clysters* are of old repute, coming down to us from the time of Helvetius. The papers cited by Dr. Woodward give no conclusive proof of the virtue of ipecac used as an enema in dysentery. "The fashion that is bringing ipecacuanha clysters into vogue has at least the merit of affording a less objectionable substitute for the frequent use of clysters of iodine and nitrate of silver."

*Antiseptic clysters*, seem to have descended to us from the days of John Hunter, who employed antiseptic decoctions of bark by enema, for dysentery, and he also employs a decoction of tormentil root and oak bark with opium, which answered the same purpose. *Charcoal*, *chloride of lime*, *Labarraques lotion*, *hyposulphite of soda*, and *creasote* have all been used since for the same purpose. Dr. Woodward says :

"We may fail in our attempts to introduce efficient doses of antiseptic substances into the blood, or to give enough by the mouth to produce any very great effect in the lower bowel, but how easy to fill the colon, if necessary, with substances that will destroy low vegetable forms of life. Accordingly, as Christian Languis resorted to enemata acidulated with oil of vitriol, by which he hoped to destroy the vermiculi he imagined to produce fluxes, the modern be-

livers in contagium animatum have employed injections of diverse substances for the purpose of killing bacteria.

“The new speculation like the old one is unproven, but it is not necessary to accept either in order to recognize the benefits likely to ensue in appropriate cases from the injection of antiseptic substances, provided those are selected which are not injurious in their action upon the inflamed mucous membrane. From this point of view salicylic acid would appear preferable to carbolic.

*Clysters of water* have their origin far back into the remote history of the curative art. *Cold water* has been highly recommended by many writers to produce a local anti-phlogistic effect; and *hot water* has been more lately recommended by those who have drawn therapeutic inferences from the blanching effects of hot water in vaginal injections.

The suggestion of Hare was to pass a long tube into the bowel, and thus enable us to change a huge internal abscess into an external lesion, and rid the colon of putrid contents. Dr. Woodward considers that the use of the injections of water seem worthy of more extended trial, but in future attempts “it would appear desirable not only that the fluid injected should be as nearly as possible of the temperature of the body, but chloride of sodium or some other metal salt should be added to it to make its specific gravity approximate that of the blood in order that the disturbing influences of rapid endosmotic processes may be avoided.”

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*Extraordinary Injury by a Midwife.*—M. Schwartz speaks, in *Archiv. für Gynäkologie* (*Brit. Med. Jour.*), of an extraordinary and shocking case, in which a midwife by inconceivable violence seems to have torn away during the act of labor what she described as “the rest of the after-birth,” but which when examined by the doctor proved to be the whole of the uterus. The ovaries and fallopian tubes remained in the abdomen. The uterus is preserved at Halle. The woman recovered in about fifteen days, and since has enjoyed good health.—*Louisville Med. News.*

## NEW MEDICINAL AGENTS.

*Recent Studies in Therapeutics.—Picrotoxine and its Properties.*

—The discovery of a new mode of treatment or a new method of cure is always a subject of congratulation, and this is especially the case when the complaint against which our efforts are directed is of common occurrence. The introduction of picrotoxine as a remedy for that distressing night sweating which frequently exhausts the little remaining strength of the victim of phthisis is worthy of notice, and we take this opportunity of reviewing our knowledge of this curious and interesting drug. This is the more necessary, as little, if any, information will be found on the subject in our ordinary text-books on materia medica or therapeutics.

Picrotoxine is the active principle of *cocculus Indicus* (*Anamirta cocculus*, the *Menispermum cocculus* of Linnæus), a plant which has been recognized as a medicine since the days of the Arabian physicians, by whom it was described under the name of *maheradsch*. This *cocculus* was probably first known in Europe as a poison for taking fish, which it first throws into violent irregular motion and then stupefies. All kinds of fish are killed by it; the barbel, it is said, taking the longest to die. Fish are inordinately fond of the berries, and, when rendered helpless by the dose they have taken, they are readily caught. They should be removed from the water as soon as they appear on the surface, and their bellies emptied, or their flesh may become poisonous and cause irritation if eaten. In nearly all civilized countries, the use of *cocculus* for this purpose is illegal. *Cocculus* has also been used from an early period by unprincipled brewers, partly for giving beer a due degree of bitterness without the employment of hops, partly to give it "bottom," and render it more intoxicating. In an old treatise on brewing, we find the following instructions: "Three pounds of *cocculus Indicus* to be added to ten quarters of malt, in giving it an inebriating quality which passes for strength of liquor; it also prevents the second fermentation of beer, and the bursting of bottle in warm climates." It is said to be used by thieves and bad characters for the purpose of drugging their victims."

It is a curious circumstance that, although *cocculus Indicus* possesses such powerful and valuable properties, it has in modern times

found little favor as a medicinal agent ; and we cannot help thinking that its general abandonment as a remedy was a singularly unwise step. It is a valuable local application for certain forms of skin-disease. In the east, it has been long used, applied externally in the form of a powder for the destruction of vermin on the skin, as well as for the cure of scabies ; and, in the form of ointment, it is said by Christison to be one of the best applications for the treatment of ringworm of the scalp. Speaking of the ointment of the old *Edinburgh Pharmacopœia*, he says that, although it may occasionally fail to cure the eruption, it always does good by relieving the accompanying irritation. Undoubtedly a pierotoxine ointment, made with vaseline or some similar substance, would prove a welcome addition to the armament of the dermatologist. *Cocculus Indicus* also possesses considerable value as a medicine for internal administration. A few years ago, M. Felix Planat recommended it as a remedy for epilepsy—not as a specific, but as a truly useful drug. The sole exceptions recognized by him to its curative powers in this affection are inveterate cases, whether idiopathic or symptomatic. He employs a tincture made by macerating for three weeks two hundred *grammes* of *cocculus Indicus* in one thousand *grammes* of alcohol. Of this, he begins by giving two drops twice a day, and then each successive day increases each dose by one drop until thirty drops a day are being taken. He then gradually reduces the quantity a drop at a time until the original dose is reached, when the treatment is suspended for a fortnight : after which it is renewed, and again intermitted alternately during six months. These directions certainly seem somewhat fanciful, but M. Planat was able to produce sixteen cases of cured epilepsy—the best criterion of the value of his treatment. His observations attracted considerable attention at the time ; and the Paris Academy of Medicine showed their appreciation of his meritorious work, extending over a period of twelve years, by awarding him a prize of five hundred francs. Pierotoxine is undoubtedly worthy of a trial in obstinate cases, especially when the attacks occur chiefly at night. For chorea, it is recommended by no less an authority than Gubler ; and according to Tschudi and others, it is also employed in various forms of dyspepsia, notably when there is severe epigastric pain aggravated by pressure or by taking food. Dr. Phillips speaks of



it as being of singular service when the colon is distended with flatus, and when the bowels are constipated and the motions hard and lumpy. He also recommends it for certain symptoms associated with irregular menstruation. In females of nervous temperament and of thin and delicate fabric of body, the menses are often preceded by paroxysms of colic felt in the hypogastric region, and accompanied by more or less pain in the back and hips. This pain not only precedes the appearance of the catamenia at each period, but accompanies them for the first day or two. They are of a twisting, griping, or colicky character, and are attended by a scanty discharge or a profuse one, in either case somewhat paler than usual, and mixed with clots and shreds of membrane. The administration of two or three drops of a saturated tincture of cocculus three or four times a day prior to the expected flow, and continued during the first two or three days of its progress, will frequently ward off the pains and render the discharge more natural.

Picrotoxine, or cocculine as it is sometimes called, was discovered by Bouillay in 1812; and its composition is represented by the formula  $C^{12} H^{14} O^5$ . It may be obtained in several different ways, details of which will be found in Watt's *Dictionary* and other works on chemistry. It is colorless, inodorous, has an intensely bitter taste, and is neutral to test-paper. It is soluble in water, alcohol, ether, and fixed oils, and it crystallizes out from aqueous solutions in the form of beautiful stellate groups of colorless needles. In its physiological action it is most peculiar. In some respects, its effects on the living organism resemble those of strychnia. Tonic and clonic spasms of great severity and violence culminating speedily in death are induced by large doses, and opisthotonos and gasping are frequent concomitants. It induces spasmodic contractions, involving first a single group of muscles, and finally almost every muscle in the body. The tetanic cramps of picrotoxine differ from those of strychnia in that the latter affect chiefly the extensors. It has been well said that the convulsions of picrotoxine more resemble the choreic, those of strychnia, the tetanic; in other words, picrotoxine exerts its influence chiefly on the cerebral centres, whilst strychnia affects the spinal. It must be confessed that the exact mode of action of picrotoxine on the cerebrum is but imperfectly understood. An attempt has been made to explain its tetanizing

action, on the supposition that it exerts an impression on Setchenow's inhibitory centre of reflex movements. In some observations made by Glover, of Newcastle-on-Tyne five and twenty years ago, it was found that a dog under the influence of the drug exhibited symptoms resembling those of hydrophobia, and, in addition, a singular convulsive movement backwards was observed, shown in a slight degree by convulsive twitches of head, neck, and shoulders backwards, and in a marked manner by regular forced retrogressive movements. The animal tried to mount some steps, and even clung to them with energy; but he was forced down again backwards, and continued to progress in this direction until he fell seized with tetanic convulsion. A very constant effect of large doses of the drug on the lower animals is stimulation of the peristaltic action of the intestine. The bowels are almost always evacuated in the freest manner, and sometimes repeatedly, the motions being generally moist and pulpy. The bladder, too, is emptied more than once during the action of the drug; but whether this is due simply to stimulation of the muscular tissue of that viscus, or whether it is the result of diuresis, is not known. Profuse salivation as Glover has shown, is another symptom. Two scruples were injected, under the skin of a bull-dog, and in a few minutes the animal got up and rushed forward, a terrific object, the saliva and foam flying in sheets from his mouth, and his eyes glaring. He suddenly stopped, ran straight backwards, and was seized with a violent tetanus, at the end of which he was dead. Dr. Crichton Browne, in his papers published in the *British Medical Journal* for 1875, has shown that in the lower animals, picrotoxine first quickens, and finally retards, the movements of respiration and the cardiac contractions. He finds, too, that its action on the temperature of the body is very uniform and constant. Immediately after its administration, there is a slight rise attributable to the agitation attending the exhibition of the drug, and subsequently there is a steady fall, amounting sometimes to seven or eight degrees.

Quite recently, Dr. Murrell has introduced picrotoxine as a remedy for the night-sweating of phthisis. He uses a 1 in 240 solution in water, and of this he gives from one to four minims three times a day, the last dose being taken at bed time, or immediately before the time at which the perspiration usually commences. He has

employed this mode of treatment at the Royal Hospital for Diseases of the Chest in twenty cases with only one failure. The sweating is usually arrested in two or three days, and there is no return for a fortnight or more. The picrotoxine is best given alone, and not in a mixture, and it has been found to succeed after oxide of zinc, belladonna, Dover's powder, and other remedies have failed. A great advantage of the treatment is that it does not make the skin too dry, but leaves it comfortably moist, whilst not unfrequently atropia seems to parch it up. The aqueous solution is apt to deposit crystals in winter, but it soon clears up on warming.—*Brit. Med. Journal.—Cin. Lancet and Clinic.*

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*The Stigmata of Maize* [corn "silk"].—A Paris correspondent writes, in the *Medical Press and Circular* :

The stigmata of maize seems to gain partizans in this country. Its diuretic properties are being much experimented upon, giving, as usual, contradictory results. This new remedy was brought under the notice of the profession about six months ago, by Dr. Bafaud, who, practicing in the Landes, observed that peasants freely used an infusion of the stigmata for attacks of gravel. But it appears that in Mexico the colonists used it in vesical catarrh from time immemorial. Recently the French medical press have received numerous communications upon the stigmata of maize, and many articles have been published, the last of which one is from Dr. Landrieux, who cites two cases in proof of its diuretic properties—the first that of an individual attacked with ascites consequent on cirrhosis. Under the influence of the drug, given in the form of syrup, the quantity of the urine arose progressively and rapidly from five hundred grammes to twelve hundred and fifteen hundred grammes. On continuing this treatment for about three weeks all ascites disappeared. The other case was that of a woman, aged sixty-eight, the subject of heart-disease. There was considerable œdema of the lower extremities, enormous ascites, pulmonary congestion, renal congestion, causing a considerable diminution of the urinary excretion. The stigmata of maize was administered with the result of increasing the quantity of urine from two hundred to eight hundred grammes in twenty-four hours. The œdema and ascites disappeared in a short time. Dr. Landrieux terminates his article with the fol-

lowing conclusions: 1. Not only the different preparations of the stigmata of maize are useful as a modifying agent of the urine, but these same preparations can be equally considered as an incontestible diuretic agent; 2. Diuresis is rapidly produced; 3. The pulse becomes regular under its influence, the arterial tension increases, while that of the veins diminishes; Complete tolerance of the drug, and in chronic cases the treatment might be continued during a month or six weeks without the slightest inconvenience.

A discussion on the effects of the drug took place lately at Montpellier. M. Caston, Professor at the Faculty of Montpellier, believed it acted less as a diuretic than an *anesthésique local*, while M. Deunecé, of Bordeaux, thought it had an action *élective* on the mucous membrane of the bladder, but all agreed that it eased the pain in renal colic. At all events it is worth a trial, being cheap and easily procured. The dose would be eight grams for a pint in infusion, to be taken *ad libitum*.

[The entire pistils of the corn known as the "silk" is what is meant here, evidently, and not the stigmata alone. This explanation is not necessary for those physicians who are botanists. It looks like this news comes from a far way for our enlightenment. The query constantly recurs to students of therapeutics, Why does the rarity of a drug enhance its value? In Germany, oil of turpentine is highly vaunted. In North Carolina, close as we are to the distilleries, we pass by the home remedy for some rare article. This new article can be tested by all the coming season.] W.

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*Ilex Glabra*—Gall berry. Ink berry.—This plant was first called to the attention of the profession in Eastern North Carolina by Dr. J. B. Seavey. In his hands he found it to give excellent results in the treatment of malarial fevers. These experiments were made during the late war, at a time when quinine was not to be had in civil practice, and therefore they were carried out most scrupulously. A report of Dr. Seavey's results was made to the New Hanover County Association after the war, and the summary was, that a decoction of *Ilex glabra* succeeded better than any of the indigenous remedies tried. Since that time there has been less need for substitutes for quinine, and the drug has again fallen into disuse.

A few months ago Messrs. Sharpe & Dohme, of Baltimore, pre-

pared for us a fluid extract of *Ilex Glabra*, which we have used with the following results :

In acute tertian remittent we have given the fluid extract in teaspoonful doses every two hours until six doses were administered. At the end of that time, nausea and purging ensued.

On the second day, the day of the expected fever, the extract was given in the same doses and at the same intervals with the effect of nauseating and purging the patient. The paroxysm of ague was averted, but the purging was so persistent that quinine was resorted to until convalescence was established.

Subsequent experience gave the same results, and we suspect it will turn out on further trial that the purgative effects of the *Ilex glabra* will be found superior to the anti-periodic effects. It seems from this knowledge of the drug at any rate, that these properties will forbid its use except in a limited number of cases in which a purgative is indicated.

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*Cure of Pain by Acupuncture on the Opposite Side of the Body.*  
—Dumontpallier, Physician to La Pitié, (London *Medical Record*) claims to have had good results in the relief of pain, by puncturing the corresponding spot on the sound side, for the relief of neuralgia, severe pleurodynia, acute articular rheumatism, sciatica, &c. The pains have been abolished, sometimes instantly, and more or less permanently, by acupuncture of corresponding parts in the opposite side. These clinical facts are of much interest, and although the therapeutic effort may prove to be of only limited and occasional value, its simplicity and the ease with which it is effected are manifest, and indicate it as a resource not to be despised. Simple hypodermic injections of water may be resorted to, or punctures with thin metal pins.

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*Sodium Benzoate*, a moribund new remedy, which took are German cousins by storm, as a remedy for consumption and diphtheria, seems to be at its last gasp. The diligent hospital doctors in Germany have found that no constant effect on hectic fever could be detected by its use ; that the patients lost or gained in weight according to the degree of fever present, just as if they were under ordinary treatment ; the local symptoms as revealed by auscultation



remained unaltered or became worse ; night sweats continued as before ; the patients seemed to cough less for some hours after using the inhalation ; not a single symptom of phthisis was improved by the inhalations ; several complained of nausea and vomiting and two had bleeding from the lungs ; lastly, an ulcer of the ventricular bands of the larynx, diarrhoea, strangury, vomiting, continual cough, conjunctivitis, and breath loaded with benzoic acid befel one patient. This is what the *Medical Times and Gazette* says the Berlin doctors have found, and we pity the druggists who have caught the speculative mania too late.

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*Magpie Flesh for the Falling Sickness.*—Faith in the pulverized flesh of magpie as an infallible cure for “the falling sickness” receives the credence of the Princess Bismarck.

Letters have been addressed to the Shooting Club in order to secure a sufficient supply for her.

This seems to be on a par with an incident in a case of midwifery seen not long ago in a negro hut. The negro midwife laughed at our lack of knowledge, when we enquired why she put the bleeding maternal end of the umbilical cord in the mouth of a female infant.

She informed us it was to prevent after-pains in the event the girl should become a mother.

It is very true that the human race holds to superstitions with unabated tenacity, and it is not essentially different whether one lives in the palace of a prince, or the hovel of the negro.

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*Rapid Diagnosis.*—“As our friend, Dr. G., was showing some lady visitors over the asylum of which he is the Superintendent, they came to a room in which three women were sewing. ‘Dear me, one of the visitors whispered, what vicious looking creatures ! Pray what are they here for ?’ ‘Because they have no other home ; this is our sitting-room, and they are my wife and two daughters,’ blandly replied the doctor.”—*Canada Journal.*—*British Medical Journal.*

## SCARLET FEVER.\*

By S. W. FOWLER, M. D.

This dread disease, which carries so much terror and apprehension with it, and renders at various times so many hearths desolate, rages at different portions of the year and in different localities, with a greater or less degree of fatality.

It is acknowledged to be one of the most readily contagious diseases among the *zymotic troubles*. Two years ago we experienced one of these epidemic visitations, which shocked the households of many in our city, and startled the surrounding community with much fear and anxiety. Hundreds of children of all ages were stricken down during the epidemic, and notwithstanding the malignancy and wide spread form of it, the fatality was remarkably small.

The object of the paper is to speak more particularly of the facts and conclusions based upon the cases (265) which came under our immediate notice.

That this is one and the same disease from the scarlatina, simply to the scarlatina we have no doubt; having as its cause a "noxious agent or poison acting on certain glands" to disturb their nutritive action, causing the generation of a peculiar poison, which is readily transmitted to other glands of different bodies, and producing like distribution. It disturbs, to a greater or less degree, the nutritive action of the entire body. It is our desire to dwell more particularly on the peculiar mode of action, rather than the *causation*.

The uncertainty of action and the inability to give a correct prognosis, depends largely upon understanding the degree of change in the nutritive action of the body during the course of the disease. The partial or complete suspension of nutrition in different glands and organs in the body and the extent of blood-poisoning, will determine the malignancy and fatality. The palpable changes that take place in the throat, and integument, the functional disturbance of the kidneys, the ear, the eye, the heart and the lungs, are all indicative of the remarkable change or modification of the normal nutrition of the organs. The surrounding influences, the rapid

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\*A paper read at the Annual Meeting of the Delaware County Medical Association, Jan. 13, 1880.

fluctuation of temperature, undue exposure during the stage of incubation, the unhealthy condition of the body, morbidly influence the whole glandular system, and materially assist in bringing about a greater change of nutrition. When this poison begins to act, and the nutrition interrupted, there will be a corresponding change or increase of the bodily temperature, and if it is left uncontrolled or not brought down, will remain high. If the system is unable to bear up under the disturbance, or fails to be sustained during the time these glandular changes are taking place, there will be interrupted functional activity of one or more of the special organs, and with the temperature persistently high, organic change and death will follow.

In the large number of carefully recorded cases, the temperature as indicated by the thermometer, was found to be the only true mode of prognosing the extent of fatality; as the admitted symptoms are the only true mode in establishing the diagnosis. The exposure to the fluctuation of temperature during the stage or period of incubation, or during the time occupied in bringing about a deranged condition of nutritive action of the whole glandular system, and at the stage when the system attempts to throw off the poison, or to eliminate it as it were, materially assisted in establishing the various forms of this trouble, and especially the anginose form. In the mild and bad anginose forms of the trouble, there would generally be a lower temperature of the body and was more easily controlled than the other forms.

The more delicately constituted children from the beginning would show a more or less *typhoid condition*.

There was a slower increase and a corresponding decrease of the temperature of the body in these cases. So far as the temperature could be controlled, and a disturbance of the nutrition prevented, just so far the degree of fatality was reduced. When the eruption or effervescence did not make an appearance, and we only had the characteristic tongue, the high temperature, the general nervous disturbance and prostration, to diagnose the nature of the case; we found the case communicating the fever to others, and the desquamation equally severe, as in the most marked forms, and the functional disturbance of the organs took place just as often.

In the first case of inoculation, all the symptoms were well marked,

and the elbow joint and the whole *arm* became swollen, and finally broke and there discharged a watery fluid for several weeks resembling the discharge from a necrosed bone. At the request of the family Dr. T. B. Williams was called in to see it. During the consultation, when he had learned the history of the case, he told the family that he was not able to give an opinion, but would also attend the case and keep a good watch over it.

The child never broke out with the rash but had the high temperature, and the desquamation was very great, and after about two months the arm healed and no *harm* was done. When the high temperature of the body was controlled and kept down, the nutrition of the body was less disturbed, and the functional impairment of the organs was less seldom seen. When the general symptoms were not alarming, but the temperature of the body high and hard to control, we found a *typhoid condition*.

We met with many symptoms where all the general symptoms were absent excepting the high temperature *strawberry* tongue and the *folliculitis* of the throat. In these cases the integument thickened, and later there was more or less itching, with desquamation the same as seen in the worst forms, when the effervescence and eruption were bad, and the degree of communicability was as great as in other forms, until the sealing was over.

It seemed the principal modes of spreading, of scattering the trouble was by the exhalations, and the secretions became affected or acted as a medium of transmission. The principal mode of entering the body we are satisfied is by inhalation. When the poison primarily effects the mucous membrane of the lungs and there effects the blood. It then in turn becomes manifest when the system begins to show improvement of nutrition, and attempts to throw off the poison. The one case cited, and the three others that were inoculated from a case where the eruption was complete, go far in proving the doctrine of inoculation and contagion. These cases all broke on the fourth day with all the symptoms well-marked. The temperature in the last three was lower and the fever rather more mild, while the symptoms were all well-marked. We found in all the four cases a local disturbance at the point of inoculation. That the poison may be swallowed we do not doubt; and may be communicated by direct inoculation we do not question.

## SENSIBLE APPEARANCE.

We found in cases where the efflorescence and the eruption were well marked, there were very little folliculitis of the throat and little or no enlargement of the lymphatic glands of the throat and neck. But in those cases where the eruption and efflorescence were present, and there was a mottled or ecchymosed condition of the integument, we would have invariably a *persistent high temperature*, marked impairment of nutrition and the danger to fatality most alarming.

A large number of cases had more or less throat trouble ; but the folliculitis and the glandular trouble under the influence of the medicine quickly subsided. In the angina forms of the trouble there was thrown out a secretion which rapidly hardened or dried and formed a grayish-white, thin, uneven membrane upon the inflamed tissues. This membrane would in short time become loose and drop off, leaving the surface red, swollen and studded with small projections similar to those seen on the *tongue*. When the treatment began early we seldom met with any derangement of the *kidneys*, and when met, the passive hyperæmia was relieved by diuretics. As was said above, by the thermometer we could best determine the degree of mildness or malignancy. The use of the thermometer in several cases began during the stage of incubation, and in this stage we would see the slow but gradual increase of temperature, often reaching  $101^{\circ}$  to  $102^{\circ}$  twenty-four or thirty-six hours previous to the marked symptoms making their appearance. When there was a slight indisposition, a little increase of the respiration and the pulse not affected, the temperature would reach  $104^{\circ}$  to  $106^{\circ}$ . When the treatment began early or previous to the gastric irritation showing itself, and before the fever or temperature became high, the cases generally were more mild and the time to run out short. This class of cases were seldom seen unless occurring in a family having the fever.

## TREATMENT.

We began the treatment of this *toxæmic* trouble with the old and well-tried remedies. Saline cathartics were given to move the bowels when necessary ; Dover's powder and sweet spirits of nitre, etc., to palliate the fever, and sponging with warm water and inunctions of glycerine, etc., to quiet the irritation of the integument ; mur.



tinct. ferri., pot. chloras, etc., for the throat; but all seemed of little value in the trouble either as palliatives or curatives.

The homœopathic infinitesimal doses of belladonna and chlorate of potash proved of still less value.

Having used salicylic acid in several cases of erysipelas with marked effect in wiping out the inflammation and bringing down the high temperature and thus stopping, as it were the conflagration of tissue, we were led to use it in this form of trouble, hoping we might control the high temperature and modify the irritation and inflammation in the integument and body.

We prescribed :

R.

Salicylic acid,  $\bar{\text{z}}$  i.

Glycerine,  $\bar{\text{z}}$  i.

Water,  $\bar{\text{z}}$  v.

M.

The solution to be kept on *ice* and the entire body to be bathed every 15 or 20 minutes, or so often as required with the solution to control the temperature of the body; we gave internally :

R.

Salicylic acid,  $\bar{\text{z}}$  i.

Sulphite of soda,  $\bar{\text{z}}$  j.

Glycerine,  $\bar{\text{z}}$  jss.

Water,  $\bar{\text{z}}$  jss.

M. Sig. One-half teaspoonful every half-hour.

The internal medicine was used when possible during the stage of *incubation*. When the temperature was high and the general nervous disturbance more or less alarming, by rapidly bringing the system under the influence of the medicine and a most persistent use of the *cold application* and a free use of ice to the throat and stomach a rapid improvement was seen.

The respirations numbering from 40 to 50 per minute would be reduced as low as 25 to 30 per minute, and the *temperature* as indicated by the thermometer would instantly drop, and as can be seen on the charts, and could be held there. The charts show how rapidly the temperature runs up from  $98^{\circ}$  to  $104^{\circ}$  to  $108^{\circ}$ , and by the remedial agents it was brought nearly normal and held there.

This was observed and noted morning and evening and watched by the nurse during the interval.

The functional disturbances were much less seen, and the emaciation and desquamation were lessened in severity. Brom. pot. was given in cases of delirium, and sweet spirits of nitre, digitalis and acetate of pot. in functional derangements of the kidneys. Milk was the exclusive *diet*. When this plan of treatment was strictly followed out, the most aggravated symptoms were mitigated and the results all expected, or wished for. In the first case of fatality, as seen on the charts, the old form of treatment was followed, and in the second the last form; but you will see she died from exhaustion. She lived 21 days, but from the first she would take little or no food. In the last two fatal cases the medicine was given internally, but external was omitted because of the determined opposition to the cold application. The temperature ran high and remained so. But in the other cases where all the symptoms were equally bad, the disturbance as great, and the temperature equally high, the persistent use of the external application with the internal medication, did lower the temperature and keep it so, and all the alarming symptoms were modified.

We were invariably met by the most determined opposition, and afterwards by the most hearty approval, and when referred to, the families would insist on their neighbors following the same course of treatment. Often we could only prove the benefit by using it (the cold application) against the earnest protestation of the parents, and only when the chill and shivering was over and the child fell into a quiet sleep would they consent for the continuance. The chill first produced would always be followed by an agreeable sensation and no more trouble followed.

When used warm the irritation was relieved, but the temperature was not brought down as when used cold. Cold water was used alone, but with not the good results as when the salicylic acid was added.—*Cin. Lancet and Clinic.*



*Cheap Sea Bathing*—A scheme is on foot in London to secure to the inhabitants of that city, pure sea-water from the English channel. If the undertaking is carried out as projected, the poorest people can enjoy the luxury of sea-bathing.

## FISSURED NIPPLES.

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Dr. Willis King, of Sedalia, sends the following to the *St. Louis Courier of Medicine*: A transcript may be useful to our readers:—Of all the small things which worry a practitioner of medicine, this apparently little ailment has been the bugbear of my professional life,—apparently so insignificant, and yet so painful, so persistent and intractable, that I have often felt that I would give a good round sum for what I could really call a remedy, and have always wished that I might never see another case of it. Do what we will, the child must suck (children do not ‘nurse’ in Sedalia, they *suck*), or the milk must be drawn with a breast-pump, and in either case the fissure is torn open and bleed, and our case is as bad as ever. I have tried everything—tr. benzoin, argent. nitras, collodion,—and have seen my work go down to nought at the hands (or mouth rather) of an infant only one week old. I found myself with a case of this kind on my hands in the month of August of this year. Two or three times the case was reported to me as cured, and as often an ‘adverse report’ had been sent in the next day. On one of these occasions I walked into my private office, trying to think of something, when my eyes fell on a bottle of ‘Professor Callen’s Brazilian Gum.’ It came to me like a revelation. I had bought the stuff to mend a Politzer’s bag. It is pure gum [India-rubber] in solution (in naphtha, I think,) and is about the consistency of thick mucilage. When exposed to the air the solvent evaporates, and leave the elastic rubber adhering to whatever it has been applied. I knew it would do. I went at once to the patient, and applied it with a camel’s hair pencil all over the nipple (except the milk-ducts) and over the areola around the nipple. It remained on three days, and came off leaving the parts entirely healed. There were one or two slight fissures afterwards, but the patient applied the remedy without sending for me, and had no further trouble. I have tried it in one other case, with equal success. I also applied it to a largely abraded surface on a man’s face, who had been thrown from a buggy, and scraped the side of his face on the ground. The remedy adhered beautifully, excluding the air, and when it came off, rubber scab, and all came together, leaving a perfectly healed surface behind. This preparation is usually kept by dealers in leather sup-

plies." [Cobblers, for mending shoes with what they call the "seamless patch," use a kind of cement, made by dissolving gutta-percha in benzine or bisulphide of carbon. It is sound in the "leather and findings" stores, put up in two ounce bottles, retailing at 15 cents. The odor is disagreeable; but if bisulphide of carbon is the solvent used it may be deodorized by tinct. iod. one-fourth, or it may be scented with mint or bergamot. Chloroform is also a solvent for gutta-percha. This solution has been used to retain the edges of incised wounds in apposition; also to protect abraded skin against mechanical injury or the absorption of poisons. The dermatologists have of late been very largely using rubber bandages in the treatment of eczema and other skin diseases, and it occurred to us that this solution of gum would be an excellent substitute, and much more convenient. On investigation, we find it has been recommended in the treatment of lepra, psoriasis, small-pox, erysipelas. We believe Dr. King is the first to recommend it for sore nipples.—*Ed. St. Louis Courier of Medicine.*

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*The Extra-Medical Application of Localized Thermometry.*—The *Medical Times and Gazette* says: Prof. Broca relates the following circumstances, which shows how a scientific idea sometimes leads to the most unexpected practical application: One evening, at the time he was engaged in his investigations on localized thermometry, he perceived after he had gone to bed a smell of smoke, and on carefully examining the room he observed at one point of the flooring a sensation of heat. On applying the thermometer at this point he found, in fact, a very notable elevation of temperature as compared with other parts of the floor. The firemen, who were sent for, seeing no appearance of flame, were somewhat displeased at having been called in for nothing, but Prof. Broca insisted that the flooring should be taken up at this point; and this having been done, flame and smoke rushed out, proceeding from a beam which was undergoing slow combustion.—*Gaz. Méd.*

[“How this world is given to lying.”—*Falstaff*.”—*Louisville Med. News.*

## A RARE CLERGYMAN.

The following from a Brooklyn clergyman to a Brooklyn physician, we take from the *King's County Proceedings* :

January 27th, 1879.

MY DEAR DOCTOR :—I never in my life called a doctor up at night and troubled him for regular attendance in a difficult case without paying something. It is a point of pride with me, and a matter of feeling. When I want a doctor, I *want* him, night or day, and I don't feel free to call at any hour if I am entirely dead-headed. You must, therefore, for the sake of my self-respect, add to all your kindness the acceptance of this check, which is not at all adequate to pay for your service, but which you will accept *on account*, with our hearty thanks for your goodness, and our sincere appreciation of your skill.

Very truly yours,

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### GRATUITOUS SERVICES TO CLERGYMEN.

Our recent remarks upon the gratuitous services to clergymen are attracting considerable attention in our exchanges. The opinion appears to be quite unanimous in favor of charging fees to all clergymen able to pay for them. Among others of our contemporaries, the *Buffalo Medical and Surgical Journal* is quite decided in its views :

“We fail to find any valid reason for these gratuitous services. The majority of the profession are members of, or attendants on some of the religious bodies, and share in the expense of their maintenance, paying their quota of the ministers salary. On what principle—certainly not of equity and justice—are they expected to dispense to the clergy, without compensation, the skill and knowledge acquired at a large expenditure of money, and of patient labor and effort, while the mechanic and laboring man enjoy no such exemption ?

“Besides, it is a fact that services, thus freely and generously rendered, are but poorly appreciated by our clerical patrons. We do not approve of pauperization, whether among the genteel and educated, or among the ignorant and vulgar. No class of men, professional or otherwise, are beyond the reach of such demoralizing influences. We approve of a just compensation for the clergy, as well as for lawyers, teachers and mechanics, and we especially endorse the apostolic injunction that the clergy should “owe no man anything,” not even their doctor ; “but to love one another,” in which category we trust the profession of medicine, always abundant in good works in ameliorating the suffering to which flesh is heir, may be included.”—*Med. Record*.



## THE MEDICAL SOCIETY OF NORTH CAROLINA.

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The 27th annual meeting of this Society will take place in Wilmington on Tuesday, the 11th day of May.

The North Carolina Board of Health, and the Board of Medical Examiners, both auxiliary bodies of the State Society, meet at the same time and in conjunction with it. The Medical Examiners are expected to be present by Saturday, the 8th, or Monday, the 10th of May, to prepare for the large number of candidates for license expected to present themselves, thereby giving new licentiates an opportunity to take part in the meetings.

The annual essay will be presented by Dr. THOMAS J. MOORE, of Charlotte, on the subject of "Pelvic Cellulitis."

EUGENE GRISSOM, M. D., LL. D., is the orator for this meeting.

J. F. SHAFFNER, A. M., M. D., of Salem, President.

L. J. PICÖT, M. D., of Littleton, N. C., Secretary.

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## EXTRACT OF MALT.

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"This invaluable preparation is rapidly gaining ground as a curative agent in all forms of chronic debility from whatever cause. It is especially applicable in bronchial affections, in syphilis, and in the extreme debility with loss of appetite depending on chronic uterine affections. There are ten or twelve preparations of Malt Extract with other Medicines. Of these I have used but three: the Simple Malt; Malt with Cod Liver Oil; and Malt with Citrate of Iron and Quinia. It is about four years since I began the use of Malt. In that time I have prescribed it frequently, and never without satisfactory results. Within the last twelve or fifteen months I have prescribed Extract of Malt with Cod Liver Oil for three confirmed consumptives, whose rapid recovery, from what was regarded as their death sickness, was looked upon as almost miraculous by all who were acquainted with the cases. I attribute their recovery to Trommer's Extract of Malt with Cod Liver Oil. It is preferable to Cod Liver Oil from the fact that it is more easily assimilated. I have never known it disagree with the stomach, except after having been taken continuously for a considerable time. Cod Liver Oil frequently unbearable. I have met with patients who could not under any circumstances take Cod Liver Oil pure, who could take with a relish Extract of Malt with Cod Liver Oil.

"Extract of Malt with Citrate of Iron and Quinia is one of our very finest tonics and fat-producers, and patients use it with a better relish than any of our bitter tonics.

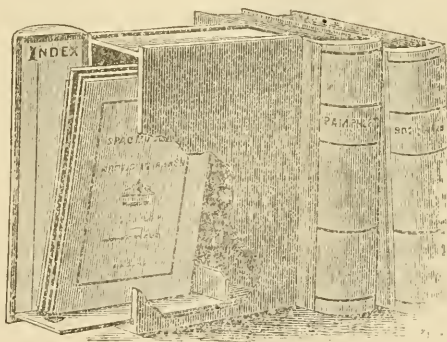
"I regard Malt and its combinations as invaluable remedies, and as having already added many years to the lives of consumptives and scrofulous patients, and the physician who fails to arm himself with this curative agent does great injustice to those who entrust their lives to his keeping."—*From a paper on "New Preparations," by Dr. H. D. Rodman, of New Haven, Kentucky, in Louisville Medical Herald (Jan. 1880.)*

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### A NEW PAMPHLET-BOX.

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Thomas L. Clacher, of New York, has devised a pamphlet-box, which will be very useful for library purposes. It is made to represent a handsomely bound book, but it is in reality a box with a spring-lid. This lid, as seen in the cut, is the back of the book,



and works by a hinge arrangement. It shuts of its own accord, by means of a steel spring concealed and imbedded in the cover. The bottom of the box on which the pamphlets rest is movable, and, when drawn out, brings the contents of the box with it. By this means, also, the lid is kept open. On the inside of the lid is an index. The mechanism is very simple, fulfils all the indications required, and makes it possible to consult the contents of the box without its removal from the library shelf. It is decidedly the best thing of the sort we have seen, and, being made of different sizes, can be used for any kind of pamphlet or periodical.

## BOOKS AND PAMPHLETS RECEIVED.

Reports of the University Normal School of 1879. Pp. 33.

Third Annual Report of the Board of Health of New Jersey. 1879. Pp. 230.

Vaccination Tracts. Preface and Supplement. William Young, 8 Neeld Terrace, Harrow Road. London. 1879.

On the Use of Water in the Treatment of Diseases of the Skin. By L. Duncan Bulkley, M. D. New York. Reprint.

Monthly Bulletin of the North Carolina Board of Health. January. 1880. Compiled by Thomas F. Wood, M. D., Secretary.

Transactions of the New Hampshire Medical Society. Eighty-Ninth Annual Session. Held at Concord, June, 1879. Pp. 184.

Twelfth Annual Report of the New York Orthopædic Dispensary and Hospital. Newton M. Shaffer, M. D. Surgeon in Charge.

Plea for Cold Climate in the Treatment of Pulmonary Consumption. Minnesota as a Health Resort. By Talbot Jones, M. D. St. Paul, Minn.

Posture in the Treatment of Intestinal Colic and Ileus; with a consideration of the Pathology of "Spasmodic Colic." By Frank H. Hamilton, M. D.

Excerpta from the Annual Report of the Board of Health. for 1879. By Joseph Holt, M. D., Sanitary Inspector of the First District of New Orleans. Pp. 12.

Headaches: Their Nature, Causes and Treatment. By William Henry Day, M. D. Third Edition. Lindsay & Blakiston. Philadelphia. 1880. Pp. 322. Price \$2.00.

Sanitary Engineering. By Wm. Caird, C. E. Member of the North Carolina Board of Health. Second Edition. Pp. 86. P. M. Hale and Edwards, Broughton & Co., Printers.

Second Annual Report of the Health Commissioner of Milwaukee. (Thirteenth Annual Report of the Department). January, 1880. Milwaukee: Edward Keogh, Printer to the City. 1880. Pp. 325.

The College and Clinical Record. No. 2. Vol. 1. A monthly journal conducted especially in the interests of the graduates and students of Jefferson Medical College. Edited by Richard J. Dunglison, M. D., and Frank Woodbury, M. D. Feb. 16, 1880.

Public Health Reports and Papers. Volume IV. Presented at the Meetings of the American Public Health Association. In the years 1877-1878 with an Abstract of the Record of Proceedings. Boston: Houghton, Osgood & Co. Riverside Press. Cambridge. 1880. Pp. 396. 8vo.

Report of the Revision of U. S. Pharmacopœia. Preliminary to the Convention of 1880. Being a Rough Draft of the General Principles, Titles, and Working Formulæ proposed for the next Pharmacopœia. Prepared and compiled by Charles Rice, Chairman of Commission. Pp. 202. New York. 1880.

# NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DeROSSET, M. D., }  
THOMAS F. WOOD, M. D., } Editors.

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## ORIGINAL COMMUNICATIONS.

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### A FEW THOUGHTS ON THE SUBDIVISIONS OF IN- SANITY.

By W. C. McDUFFIE, M. D., Fayetteville, N. C.

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When "emotional insanity" is the sole plea of defence in criminal courts, much interest must attach to it, both to the legal and medical professions, *especially* should it interest the latter; for upon the pronouncement of the existence of this disease from the lips of the exponent of medical science, every other consideration sinks to insignificance. Prejudice hushes its cry for vengeance; popular ignorance no longer conjectures and wonders at the perversity of human nature, or at the depths of what it has always considered human depravity. The very judiciary itself acknowledges the advancement of medical science, and the relief it affords to the legal profession in unravelling otherwise inextricable difficulties. Indeed, does it place heavy responsibilities upon our shoulders; yea, oftentimes in *our* hands is the issue of life or death. On us alone hangs the prisoner's fate; brought, as we frequently are, face to face with

the courts of justice. The punishment of criminals, or the escape of the innocent accused has come within the province of the medical expert and within the pale of medical science. This oftentimes brings down upon his devoted head the very anathemas of the ignorant populace. He rises, however, above them, triumphant, upon an intelligent conscience.

Fortunately for the profession, some of the ablest minds in this country, and in Europe have defined so clearly the various forms of insanity as to leave us in no doubt in a given case, where we have paid attention to such authority, to precedent cases, and to the entire surroundings of the case in hand. We need not err—we cannot err, either as to the absolute existence or non-existence of insanity in general, or as to the particular form or variety. Let me mention a few of the very highest authorities at present extant upon insanity and a synopsis of their divisions and subdivisions of this protean disease ; and first, the most recent and most elaborate is Ray—"On the Judicial Aspects of Insanity." This is the work of a man of pronounced ability and of the largest experience, a standard, both in Europe and America. Scores of cases are cited and reasons for opinions given, and such clear divisions made, that the courts are now, almost everywhere influenced by it. Prof. Ordronaux, of New York, is also recognized authority. Wharton and Stillé, the standard medico-legal jurisprudence of the land to-day, combining, as it does, the greatness of two great minds, one legal the other medical—this is much in advance of even Taylor or Beck,—and, in addition, we have the many recent lectures of such able scientists as Gray, Hammond, McDonald, and many more ; together with the indefatigable researches of our own Grissom, especially relating to the important division of insanity to which I wish presently to refer.

It must be remembered that until a very recent period the grand division of "intellectual" and "moral" insanity had not been made and recognized universally as a fact in medical or legal jurisprudence, and even now North Carolina jurisprudence has not fully comprehended the importance of its acknowledgement. Of course, in this limited article, I must be excused from discussing the legal aspects of "intellectual" insanity, as I can only touch briefly upon the other grand division—"moral," which I conceive to imply that



part of the organism comprehended in the feelings, the impulse, the emotions, and the passions, and *not* the intellect necessarily, though many authors believe that the intellect is generally more or less affected, while others are of opinion that it may or may not be, so far as perception and the knowledge of right and wrong is concerned. That is to say, the person may be suddenly seized with an insane impulse, commit an act monstrous in its character,—the impulse so strong that the judgment is overpowered and yet no lesion of the brain whatever, and that notwithstanding this maniacal conduct, the person is not bereft of a knowledge of right and wrong in the abstract,—many cases are cited. This form called by some mania transitoria, by others, emotional or impulsive insanity, is in many instances recurrent, coming on suddenly, attended sometimes by acts of violence, at others, passes off without the commission of any outrage, and the patient becomes quiet and to all appearances sane for a period, when the impulse again returns, with the same or more violence, this is also supported by the recital of many cases. This form of moral insanity or mania may be homicidal or suicidal, or may have a prefix so often mentioned in books and so little understood by the laity, to-wit : pyromania, cleptomania, dyspsomania, nymphomania, &c., and yet we know that this is an honest and proper subdivision, and that all these subdivisions are in their very nature the results of emotional augmentation—the results of an overpowering impulse, in which the reason is set aside, in which self-control is lost, and the power to govern the will is gone; yet upon all other subjects there may be no impairment of the intellect; besides this, it will be observed that these persons frequently have method, motive and even deliberation, all of which and each of which is a reasonable test of sanity. No one could give a better arrangement of tests for a sound mind than to show these attributes, yet see how lame by themselves. How often do we see the cleptomaniac show secretiveness, selection of time and place to do his theft, and commit it with method; or what is more distressing to witness the craftiness of the poor nymphomaniac, putting herself in the way methodically and deliberately to have her insane passion gratified; or the crazy house-burner stealthily applying the torch. Or to go deeper, take one whose tortured mind has dwelt for months upon suicide, finally destroys himself under some sudden impulse,

not, however, without leaving behind evidence of "method in his madness." The reasons assigned, of course, the world pronounces unsound, but nevertheless the motive is patent. Perchance it may be the fear of poverty or the continued bitings of remorse, the balance wheel running crooked, until at last society itself becomes a burden and he seeks relief in death. A hundred causes almost might be named as calculated to produce this unhingement—this overwhelming emotional impulsive desire to get rid of one's self. Disappointment is probably one of, if not *the* most powerful.

Let us look at the other insane impulse—"homicidal"—differing from the last only in its object for destruction. This may be either motiveless or with a motive. The motiveless, I believe to exist only where the intellect is seriously if not permanently impaired; the sudden desire to kill the best friend or the object of the greatest love. This is emphatically an insane impulse and is so considered without question. The delusion of an imaginary enemy, slain in imagined self-defence while a dreadful form of impulsive mania is difficult to prove to a jury. Many a poor deluded creature—innocent before his God, has been sent to His presence from the gallows by an uninformed court and jury in the past, and it may again occur unless the medical profession keep in advance of legal jurisprudence to throw light along the mazy path. Now to the impulsive, with a motive. This may differ as variously as motives differ. Curiosity may be the motive, or the motive may be to redress an actual wrong done, that is, in the nature of revenge. The first mentioned above is well illustrated in the celebrated case of the servant girl "Brixey," in London, a few years ago—a typical case—who killed her master's infant, by cutting its throat with a carving knife, and said she did it (informing the father immediately) to see what would be done with her, "whether she would be hung or transported." This was her motive. She was acquitted. As to the motive of redress, we must say that its consideration brings us to the last point to be treated in this paper; and while there are many cases upon record, and that too, of recent date; cases where the only plea of defence was impulsive mania, and where the prisoners were acquitted, yet it would be an impossible matter to satisfy a jury of the irresponsibility of the person, were it not that the surroundings of each case, all the attending circumstances, are brought clearly

to light. Every such case must stand or fall upon its own merits. All these circumstances when weighed and applied by the unbiased medical expert, enable the court and jury to see the soundness of modern medical jurisprudence, and to fully understand the "Judicial Aspects of Insanity."

It is entirely unnecessary to tax the reader's patience with the review of the twenty or more cases of very recent occurrence in this country and in Europe. One will suffice, which is probably the most notable. The case of Mary Harris, who killed Burroughs in Washington City in 1872. He had broken his promise to marry her and then tried to entice her to a place of ill-fame, in order to destroy her virtue, and thereby prevent a suit for breach of promise. Five years elapsed between the breach and the killing. No act of her's prior to the disappointment was shown to be, or suspected to be, at all out of the way. Never any appearance of the slightest symptoms of insanity. Many little acts, however, during the five years, were proven, which indicated, at least, aberration—attempts to commit suicide; violent fits of passion from the slightest provocation. It appears that at last she was suddenly seized with an impulse of revenge and traveled from her home in Iowa to Washington city; lay in wait for the object of her revenge, and shot him dead, as he came out of his office: openly, with no regard to concealment of the act. She was tried and acquitted upon the ground of emotional insanity. The ablest medical testimony was there, and pronounced her insane. Dr. C. H. Nichols, Superintendent of the Government Asylum, and President of the American Association of Superintendents of the Insane, gave the strongest testimony in her behalf. He said, "her mind was so far affected as to cause her to have violent impulses, and to be unable to restrain them." \* "He was positive in his belief that the act proceeded from insane impulse."

The learned Judge Wylie, of the Supreme Court of the District of Columbia, instructed the jury to acquit "if they found that the prisoner was impelled to the act by an insane impulse, produced either by diseased physical condition, or by moral causes operating on a diseased state of the system, stinging to madness, and for the time displacing reason from its seat."

She has since become a raving maniac and had to be sent to the

asylum. She had an aunt who was insane and a brother of unsound mind, showing hereditary taint. This case stood upon its individual merits, and was decided upon the facts deduced from its own entire surroundings.

The recent case of homicide in Lumberton, Robeson county, in a medico-legal point of view, is almost on all-fours with the above ; in many points it has more overwhelming evidences of uncontrollable impulse to violence. The following evidence was given upon the witness stand, in substance :

The prisoner was 23 years old ; most respectably connected, and up to about five months before the killing moved in the very best circle ; popular, gay, handsome and a member of the Methodist Church, waited upon by most of the young men of the place, until some year and a half before the homicide, when the deceased became so attentive as to occupy nearly the whole of her time ; visits numbering about five a week ; that he was with her upon nearly all public occasions ; gave her many beautiful presents, and was engaged to marry, the time fixed and then postponed ; that her trunk was packed for *four* consecutive months, immediately preceeding the tragedy, ready to go—expecting to go ; no evidence of her doubting the fidelity of her espoused. During this terrible suspense, finally her pregnancy became known—was known in the family during the suspense. When reported to the father through the mother, he ordered her to leave his house immediately ; that she was bitterly upbraided by both father and mother, and that she left and took shelter with a married sister ; here she was still seen by the deceased, whose attentions did not abate ; and further, that he pledged his honor to marry her, that he promised this to her sister and her husband, faithfully to perform it, just as soon as he could go to Baltimore, arrange his business affairs and return ; that he would marry her and take her out of Lumberton in twenty-four hours thereafter ; that this was accepted as final by the prisoner, her sister, and her sister's husband ; that the deceased then took an affectionate farewell of her and left ; that in three or four days she received a short letter from him bidding her be of good cheer, &c. ; that in the meantime she was twitted with her condition, by her mother and sister and doubts expressed by them of the fidelity of the deceased, which caused much depression of spirits with the prisoner ;

but that she never doubted his truthfulness ; still, at the very mention of probable unfaithfulness, she would fly into most violent rage, threats to destroy herself were made ; on one occasion seized a carving knife, which was taken from her by her sister, &c., still declaring that he was her only friend and that he would come back and fulfill his promise ; that in three or four days more she received another short letter as before of a cheering kind ; and still another of like import ; and that then, unexpectedly, without warning, a fatal letter came, altogether terrible in its import. This letter contained the information that he would be in Lumberton in a few days, but not to see her ; that she was false, base, and had no further claims upon him ; that if she persisted in her claims he would take steps to show her false character, and that henceforth she “need not look upon him even in the light of a friend.” This and all the notes and letters of affection from him to her were read in court. The evidence was that after the receipt of this letter, that she became a changed being ; that she refused food, refused to converse, took no care of her person or dress ; that she would put on neither shoes nor stockings ; that she walked the house and yard, almost continuously, took no notice of company ; that she would sit for hours and bite the ends of her fingers until they would bleed ; that she did not sleep, but cried out all times of the night, most piteously, and that they of the household believed “she was a crazy girl.” This lasted a few days, only a few, when the deceased arrived at the hotel in Lumberton. (How her attention was attracted to him, was not in evidence.) That she went to the hotel and enquired for him ; did not find him, but went again, and upon his putting out his hand to greet her, she presented a pistol to his breast and fired ; saying, “you have ruined me and this is my revenge,” or words to that effect ; that the pistol was immediately wrested from her, and under the escort of a gentleman acquaintance, who took charge of the pistol, she returned to her sister’s house (repeatedly asking for the pistol) and that in *three hours thereafter* she gave birth to a living child, which child had no appearance of being premature ; that for several days following she had delirium ; that she was calm, exceedingly so, at the time of the meeting at the hotel ; that all that morning, however, there was evident symptoms of labor going on ; that there was no attempt to



conceal or deny the act, but upon the contrary, expressed her belief that she did right, "that some one else would have done it, and that would have been wrong," and that since the homicide she has been in a melancholic, apathetic condition.

Further evidence was, that in childhood she had chorea; that after puberty she had violent suffering from dysmenorrhœa; that she was always of a most nervous temperament, this temperament largely predominating; that her father had been insane for the past fourteen years—a monomaniac.

After hearing the above evidence, I was asked as an expert witness, "suppose the testimony of the witnesses to be true, and that the jury believe it, what, in your opinion was the condition of the prisoner's mind at the time of the homicide?" I answered, that I believed she was under the influence of an uncontrollable impulse, at the time of the homicide, which unseated her reason and judgment, and that this emotional mania was promoted by the very throes of labor, and that she was impelled forward, with no power to resist its overwhelming influence; "that the power over the will was gone;" that there was wild despair to urge and no reason to restrain; and that the going forth, that morning, was not the mere act of rage, but it was the action of despair—the very culmination of desperation. I believed that if the departed reason had left one spark behind, it was but a spark of perception to point out the object of her search, while the agony of despair, like a ball of fire upon the brain, lighted the path to revenge." And it must be manifest, that was accelerated by the struggling efforts of the unborn child for a separate existence, as if to urge the maddened mother to another and final conflict.

Such, I conceive to be, acute impulsive mania, as laid down by the best authorities.

And while it is not even necessary in establishing this form of insanity, to prove that the person "did not know right from wrong in the abstract." I believe that she, at that time, did not know the consequences of her act.

She was acquitted.

## VACCINIUM CRASSIFOLIUM AUT REPENS.\*

By E. A. ANDERSON, M. D., Wilmington, N. C.

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In introducing this hitherto untried and unknown plant as a diuretic to the profession, I am in doubt if it has been described or used before. If so, I am ignorant of the fact, and have sought in vain among all of the works in *Materia Medica* and *Dispensatories* at my command, for any botanical description of this vine or any therapeutical application of its properties. It is a creeper, growing in low, upland savannahs, in moist, damp places, and in the margin of ditches; but not in the water or in dry, sandy lands. In many places it covers the ground like a carpet and is generally from one to two feet in length, though I have occasionally met with it some three to four feet long, resembling very much the running box of our gardens. It bears on the extreme end of the vine, and on the under side a small cluster of small, bell-shaped pinkish or white flowers, resembling the lily of the valley. The fruit consists of from three to four berries which are at first green, then red, and finally when ripe of a black color like the huckleberry, and of a sweetish taste. The leaves are small, oval or oblong, alternate thick, shining, very much resembling the *uva ursi* of the shops, in size, shape and taste, and when chewed of a very decided, pleasant, astringent taste. When boiled in an iron pot, the decoction becomes of a dark, inky color, showing the action of gallic acid on the iron, and hence, I always direct the infusion to be made either in a tin, porcelain or bell metal vessel. I am told by a native of North Germany that this plant is identical with, or at least, closely resembles the *uva ursi* of commerce which is baled and shipped in large quantities to this country. Whether this is true or not I hope to show that it not only equals; but that it far surpasses the *uva ursi* or *buchu* in its diuretic properties.

During the year 1868, in the fall of the year, the late Dr. Adam E. Wright was employed in attending the inmates of the county alms house of New Hanover County, North Carolina. Among the patients, most of whom were broken down by intemperance and

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\*See Chapman's *Flora of the Southern States*, page 259, and also the *Woody Plants of North Carolina*, by the late Rev. M. A. Curtis, D. D., Rector of Christ Church Hillsborough, N. C., page 87.

innutrition, the result of poverty, vice and old age, were many obstinate cases of dropsy. These cases were treated by Dr. Wright in the usual manner with varying success, but some baffled all his efforts. Mr. Moore, the Superintendent of the Alms House, a good meaning, but ignorant man, proposed to Dr. Wright to cure these cases himself with a vegetable remedy, the secret of which was known only to himself. Upon the doctor's consent, he administered the decoction in large doses, causing the patient to drink no other fluids, and no water. The result was striking and remarkable. Profuse diuresis, and in some cases diaphoresis ensued the first or second day, the swelling in the limbs and abdomen went away, and the patient in some cases was radically cured, and in most relieved.

The infusion or decoction can be drunk either warm or cold. When taken cold it is of a light wine color and of a slightly insipid sweetish taste and not unpleasant when mixed with ice. Its diuretic properties may be increased and a very pleasant sub-acid beverage prepared by using cream of tartar. (potass. bi. tart.) loaf sugar and lemon sliced, with ice. This makes a very palatable lemonade, which is highly diuretic and laxative. Moore, like most ignorant men, constantly refused to impart the secret of his plant as long as he retained the position of Superintendent of the Alms House. A political change soon took place in the county, and he was removed and left for another county. Before leaving he showed Dr. Wright the vine and gave him a specimen which the doctor unfortunately lost. Dr. Wright described and drew the plant, and I sought for it to no purpose for a long time. At last I accidentally found it, and upon showing it to Dr. Wright it was at once recognized. The specimen was then exhibited to the late Doctor James F. McRee, Sr., who was the most eminent botanist at that time in Wilmington, N. C. Dr. McRee pronounced it to be the *vaccinium crassifolium aut repens*. I then commenced experimenting with it in regard to its diuretic properties and found them of the highest order.

*Case I.*—W. Q., a fine healthy man, aged 25 years, came to me with general anasarca and ascites; feet and ankles swelled enormously, great distension of the abdomen, urine scanty and high colored; dropsy simple and uncomplicated, produced by working in the water cutting ditches. Placed him upon a strong, decoction

of the vaccinium and nothing else, in order to test its diuretic powers thoroughly. In a week the swelling and tumefaction had all disappeared, urine copious and clear, and no return of the dropsy. This was a simple and uncomplicated case, dependent upon check of perspiration, and upon no organic disease. It is introduced here to show its diuretic properties in uncomplicated dropsy.

*Case II.*—W. S., age 60, shipsmith, a strong robust man for his years, occasionally troubled with asthma and some suspicions of valvular disease of the heart, sent for me with much swelling of the feet and ankles and enlargement of the abdomen with distinct fluctuation, urine scanty and high colored; placed him upon a strong infusion of the vaccinium and nothing else. Copious diuresis ensued, urine became clear, breathing easy and natural. The enlargement of abdomen subsided, and the tumefaction of the feet and ankles passed off rapidly. Up to this time, more than two years, has had no return of the disease and is in fair average health.

*Case III.*—J. W., farmer, age 70, a man of very intemperate habits, enormous swelling of the abdomen, urine scanty and albuminous. Put him upon a free use of the decoction of the vaccinium with the result of promoting copious diuresis, under which the water was rapidly removed from the abdomen, ankles, feet and legs. As this was a case of dropsy dependent upon disease of the heart and liver, and a constitution broken down by excessive intemperance, no permanent relief was afforded. The fluid soon returned, was again removed by the vaccinium, and again returned. Vaccinium failed this time to give relief. Tapping was resorted to, an enormous quantity of fluid removed; but the patient finally succumbed and death came kindly to his relief. This case is here cited, not to prove that this agent will cure complicated dropsy; but that it will in many cases afford striking relief even in dropsy, dependent upon and caused by extensive organic disease.

*Case IV.*—M. A., age 45, married, healthy, has five children, consulted me for jaundice extending over the entire body; urine scanty and loaded with bile. Placed her upon vaccinium in large doses, drinking no water and using no other fluid than the decoction. In a week the urine became clear and copious, the yellow hue disappeared from the skin and the patient made a rapid and perfect recovery. This was a case of jaundice depending upon torpor of the

kidneys and bowels in a very healthy person, and is introduced simply to show the strong diuretic properties of this agent.

I might cite numerous other cases; but fear to make this article too long and take up too much valuable space in your JOURNAL. I think these are sufficient to draw attention to this plant, and to extend its use more largely among the profession. It possesses marked astringent tonic and diuretic properties, and is very useful in chronic diarrhœa and dysentery. Its principle use, however, is in affections of the kidney and urinary passages. In incontinence of urine and gonorrhœa combined with gelsemium it is the best agent I have ever employed. As a diuretic I consider it superior to buchu or uva ursi. It grows abundantly in the Southern States and is a perennial plant, green the entire year even in mid-winter.

I have received letters from all parts of the country from Maine to Louisiana, from Canada to California, amounting to some hundred or more, attesting the diuretic properties of the vaccinium. From these I have taken some hap-hazard and append extracts as below. Want of space forbids my selecting but few.

NEW PETERSBURG, HIGHLAND CO., OHIO, Nov. 22, 1870.

DR. E. A. ANDERSON—*Dear Doctor*:—I received your letter of date Nov. 2d and the package of vaccinium, for which you will accept my thanks. The remedy which you have brought to notice, I think, is a valuable acquaintance to our means to relieve the diseased. The patient for whom I most desired the new remedy, said if he could but be relieved for one day he would be satisfied, his case can only be relieved temporarily as his dropsy depends on tuberculosis. I never saw such an enormous anasarca in any one before. He has been using the vaccinium about ten days and it has relieved him more than anything he has used, he is now passing about eight pints of urine per day. He is very anxious to continue the medicine and has the flattering hope which consumption gives, that he will even yet get well. It is the first thing that has acted as a diuretic in him.

Very respectfully,

R. A. DWYER, M. D.

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PETERSBURG, VA., Feb. 16th, 1871.

E. A. ANDERSON, M. D.—*Dear Sir*:—Yours of the 3d inst., in regard to the vaccinium crassifolium was duly received and also



the package containing the article in question. I would have acknowledged the receipt of it before ; but that before replying I was desirous of having it tested in the case of a woman with dropsy at the city alms house. I showed it to Dr. Hugh Stockdell, of the city alms house, who having read the article in the *Journal of Materia Medica* desired to give it a trial. The case in question had been under the care of three physicians before she was sent to the above institution. She had been tapped three times without permanent benefit. Up to this time she has taken about 6 oz. of the plant in the form of decoction with great benefit and with a fair prospect of ultimate recovery. If you could be able to send another lot I should be greatly obliged.

Very truly,

O. P. HOWE.

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GEORGIA, IND., June 9th, 1871.

DR. E. A. ANDERSON—*Dear Sir*:—I tried your remedy for dropsy, the running huckleberry. It has proved a success with me. I have used all you sent me. I would not give it for *all the remedies* I have ever tried. Please send me three or four pounds by express to Huron, Indiana. It is the thing.

Yours truly,

JOHN BURTON, M. D.

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NEWNAN, GA., January 20th, 1876.

DR. E. A. ANDERSON—*Dear Sir*:—Three years ago I communicated with you on the subject of the vaccinium. Since you sent the package I have used it successfully in a great many cases, and thank you for your kindness for supplying me with it, and also for calling the attention of the profession to this valuable diuretic.

Very truly,

J. T. REESE.

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NEW PETERSBURG, HIGHLAND CO., OHIO, April 10th, 1877.

DR. E. A. ANDERSON—*Dear Doctor*:—Several years ago you sent me a coffee sack full of the vaccinium crassifolium for which I shall always feel obliged. I entirely relieved one old man of dropsy of the abdomen and chest, one other greatly relieved. Please send me another lot and oblige yours truly.

R. A. DWYER, M. D.

NEWNAN, GA., April 26th, 1879.

DR. E. A. ANDERSON—*Dear Sir*:—You will remember me as sending to you for the vaccinium as recommended by you in the medical journals. I am so much pleased with it, that the sack has been entirely consumed, and you will please send me as much more.

Yours truly,

J. T. REESE.

Physicians wishing the vaccinium to experiment with, can obtain the same in any quantity by writing to John K. McIlhenny, druggist, northeast corner Market and Front Streets, Wilmington, N. C.

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## SCLEROSIS OF THE ANTERO-LATERAL COLUMNS OF THE LUMBAR PORTION OF THE SPINAL CORD—ACUTE PLEURISY.

A Clinical Lecture delivered at the Hospital of the University of Pennsylvania, September 13th, 1879.

By WM. PEPPER, M. D.

Prof. of Clinical Medicine in the University of Pennsylvania.

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Reported by Wm. H. Morrison, M. D., for the NORTH CAROLINA MEDICAL JOURNAL.

GENTLEMEN:—This young man is 26 years of age, he is a miner by occupation. He has enjoyed good health up to the time of his present sickness. His occupation exposes him to great vicissitudes of temperature and to constant damp. You will find a large number of cases in practice resulting from constant damp and repeated chilling of the body. Under such circumstances rheumatism and chronic Bright's disease are common and we often see diseases of the nervous system inflammatory in their origin. These diseases are very common among miners.

The first symptom in this case was numbness commencing in the feet. There is not absolute anæsthesia; but the numbness was a very early symptom. It implies some obstruction between the peripheral extremity of the nerve and the spinal cord. Very soon the

sensory were joined by motor symptoms. The sensory symptoms never became worse. There was never much pain in the limbs showing that the posterior columns were attacked only in a slight degree and soon recovered. The motor functions of the lower part of the cord are seriously affected. The arms and head have not been involved. There is no sign that the lesion has extended above the lumbar portion of the cord. Some time he has to urinate three or four times during the night, at others, not at all. The power over the rectum is not affected. This shows that the deeper portions of the cord have not been involved. When disease involves the deep portion of the antero-lateral column, there is trouble with the bowels and bladder. There is great loss of power in the muscles of the legs, but it is not complete. It is associated with a very curious state of irritability of the muscles for, as you see, the slightest touch is followed by marked trembling. We have found there, in this case, disturbance of sensation, almost complete paralysis affecting both legs, but not involving the bladder and rectum, and that the paralysis is attended with spasmodic trembling.

This disease has commenced as a congestion, which, being often repeated, has been followed by a meningitis of the lumbar portion of the cord, which has also involved the superficial part of the cord. It is in such cases, where the disease involves the surface of the membranes, that we have spasm and irritability. The disease has gone on to produce the state known as sclerosis, a thickening of the loose connective tissue which contracting, presses upon the nerve fibres, destroying some and irritating others. It thus happens that we have spasmodic trembling and loss of motor-power at the same time.

In this case we have cortical sclerosis of the antero-lateral columns of the lumbar portion of the cord, caused by exposure to damp and rapid changing of temperature.

The prognosis is better in this case than it would be if the man was older. It also has an inflammatory origin and is, therefore, more favorable than if it was due to a degenerative process.

In our treatment of the case we should try to save as much as possible of the cord not yet diseased.

The treatment should consist of powerful counter irritation along the spine either by the creation of an issue, or by the repeated ap-

plication of croton oil or by some pustulating ointment. Internally, the prolonged use of iodide of potassium, and some mercurial salt or salt of silver. The patient must be well fed. He must use his muscles as much as possible. There must also be constant and systematic kneading of the muscles. The circulation in the limbs must be kept up by the daily use of massage. I have seen this treatment, when persevered in for many months, followed by great improvement.

## ACUTE PLEURISY.

The patient now before you suffers from an extremely common affection and one which we should be able to recognize promptly. She applied at the hospital about a week ago, with a little fever and the statement that ten days previously while in her ordinary health, which is not very robust, she had a slight chill and immediately afterwards had a sharp pain in the left side, which was increased by cough. She had a dry hacking cough. These symptoms continued for a couple of days, the patient continuing to go about, then the pain became less and was followed by a sense of weight and dragging in the left side. This is the history of a simply acute pleurisy. It is distinguished on the one hand from rheumatism affecting the chest walls. In rheumatism, we do not usually have much fever, there does not continue any shortness of breath or weight in the side when the pain is relieved. At the first moment of the attack it may not be possible to distinguish rheumatism from pleurisy in this manner. The pain in both diseases is very similar and increased by motion. In rheumatism there may be a little fever and there may be shortness of breath due to the pain. Under these circumstances the only way to distinguish the diseases would be by auscultation, then if you hear friction sounds you can diagnose the case as pleurisy.

When the case passes on as this one has done the symptoms mentioned show it to be pleurisy.

Pleurisy is distinguished from pneumonia on the other hand. In pneumonia, the initial chill is usually more severe, the temperature higher, the patient is sicker and unable to keep about, the pain is not usually so sharp and sudden and feels deeper. In pneumonia the cough is more marked and is attended with expectoration, at first of a thick mucus, and afterwards of a rusty colored sputa, the

respiration is more disturbed. When we make the physical examination, the diagnosis is more easy.

In this case the following are the physical signs. By placing my hands upon the chest, I find that the left side does not expand as well as the right. The right lung is resonant down to the liver. On the left side, there is dulness on percussio from the base of the lung to the apex of the scapula. When she was examined a week ago it extended a little higher. The dulness extended to the same height at the side and front of the chest. Let us now listen to the breathing. On the right side, the respiratory murmur is very strong, it is also heard at the upper part of the left lung, but there is nothing heard over the area of dulness. The vibration of the voice, i. e., vocal resonance is impaired upon the left side. There is also weakness of vocal fremitus on the left side. If we had a pneumonia we would usually find that the solidification occupied one lobe of the lung and that the dulness corresponded to that lobe. If it occupies the upper lobe, the dulness extends lower in front than behind. If it occupies the lower lobe, as it usually does, the dulness extends higher behind than in front. Sometimes only a portion of the lung is involved, then the dulness extends only over the affected area. The dulness is usually not so absolute as in pleurisy.

If we auscult a pneumonic lung, we find that, although the vesicles are filled with exudation, yet there is bronchial breathing. We would also find increased vocal fremitus and resonance.

The dulness in pleurisy is caused by a serous effusion. There are one or two other points that I will glance at in passing. If the lung was solidified by inflammation, it would not occupy a greater space than in full inspiration and that is not large enough to displace the other organs; but if a considerable amount of effusion takes place, it at first presses the lung against the spinal column and then, if it increases, displaces the other organs. It is generally the heart that is most easily displaced. We should always notice where the heart strikes the chest wall. In this case it is under the sternum, an inch and a half to the right of its normal position. Lastly, if the dulness was due to solidification of the lung, changing the position of the body would not change the position of the dulness; but if the dulness is due to effusion of liquid matter, it will usually change with the position of the body. Now, in this patient the dulness is



an inch lower while she is lying upon her back and also while upon her face. There should be a greater difference than this if the effusion was free to move. The liquid is kept from moving by bands of lymph, which have been thrown out and unite the pulmonary and costal pleurae forming a more or less perfect sac. If this effusion was free to move there should be a difference of at least three inches. The effusion of lymph will render the absorption of the liquid more tedious.

The treatment of this affection as of every case of simple acute pleurisy is as follows :

If you see the case in the earliest stage, you may by depletion, lessen\* the amount of effusion, a dozen or twenty leeches may be applied over the seat of pain or wet cups may be used. You will also give such remedies as increase the contractility of the vessels. If you also give remedies that will lessen all action and prevent the migration of cells, you will lessen the effusion of lymph. Quinia will do both. I usually give moderately full doses of quinia, twelve to sixteen grains per day. I would also give digitalis for the same purpose. This should be the treatment until the second or third day when effusion occurs. During this time the patient should be kept in bed on a restricted diet. By the third or fourth day, you can judge as to how large the effusion will be.

We have now to promote the absorption of the effusion. The fever has now subsided and the pain has been relieved by the separation of the two layers of pleura. Often, in the first stage, morphia is required to relieve the pain.

If the patient is left alone, kept warm in bed, nature is usually able to promote the absorption ; but I think we can help her. The remedies that I use are small doses of mercury or iodide of potassium associated with a diuretic salt as the acetate of potash. I would be governed in the choice of these remedies by the condition of the stomach and digestion. If the stomach was irritable, the tongue loaded and the secretions scanty, I would use small doses of calomel ; keeping up, also, the use of digitalis. If the tongue was clean and the secretions of the stomach and liver were free, I would use the iodide of potassium and the acetate of potash, four or five grains of the former with ten grains of the latter three or four times a day still keeping up the digitalis. The quinia may be continued in small doses as a tonic.

The external treatment consists in the application of a large blister or the use of croton oil or of iodine with a little croton oil. Our patient is taking the iodide and acetate of potassium. We will now order a large blister to be applied over the seat of effusion.

After the effusion has been removed, there will still be some dullness and a little trouble in breathing until the lymph has been absorbed.

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### UNITED STATES POSTAL LAW.

We would direct attention to the following selection from the law regulating certain relations obtaining between the publisher of a journal and those who read. Fortunately we have but few on our list whose especial attention we would ask to this matter. These few are those who have not yet favored us with their remittances for the current volume. We shall be pleased to hear from these gentlemen at their earliest convenience :

1. A postmaster is required to give notice *by letter* (returning a paper does not answer the law) when a subscriber does not take his paper out of the office, and state the reasons for its not being taken. Any neglect to do so makes the postmaster *responsible* to the publishers for payment.

2. Any person who takes a paper from the post office, whether directed to his name or another, or whether he has subscribed or not, is responsible for the pay.

3. If a person orders his paper discontinued, he must pay all arrearages, or the publisher may continue to send it until payment is made, and collect the whole amount, *whether it be taken from the office or not*. There can be no legal discontinuance until the payment is made.

4. If the subscriber orders his paper to be stopped at a certain time, and the publisher continues to send, the subscriber is bound to pay for it *if he takes it out of the post-office*. The law proceeds upon the ground that a man must pay for what he uses.

5. The courts have decided that refusing to take a newspaper and periodicals from the post-office, or removing and leaving them uncalled for, is *prima facie* evidence of intentional fraud.

## SELECTED PAPERS.

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### A YEAR'S EXPERIENCE OF GALL-STONES.\*

By THOMAS COLE, M. D., Lond., etc.,

Physician to the Royal United Hospital, Bath.

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As hepatic diseases are seldom alluded to at our meeting, it has occurred to me that it would be not altogether unprofitable to string together a few results of my experience during the past year in the matter of gall-stones ; and I do so more from a desire to excite discussion on a subject, and thereby to benefit by the remarks of others, than from the hope of being able to impart any knowledge of a special character.

Observation would lead me to believe that gall-stones are far more common than they are generally supposed to be by our profession ; and I would add that they are often also very much more dangerous. Many cases that are diagnosed as gastric spasm, flatulence, or colic, are no doubt, due to the escape of gall-stones from their habitat into the intestines. For instance, a lady consulted me recently for sudden and severe attacks of pain in the epigastrium, and radiating thence all over the abdomen, with sickness. They lasted for from a few minutes to an hour or two. She had usually been treated for cramp in the stomach, and was surprised when I told her she was suffering from gall-stones. My opinion was shortly confirmed by my finding at least twenty calculi after one of her seizures, which lasted only about an hour—too short a time, of course, for the development of any jaundice or other symptoms of obstruction.

Only last week, I asserted with some confidence that a lady sixty-eight years old was passing a stone. She had severe pain in the hepatic region, with vomiting, loss of appetite, and constipation ; and had had many similar attacks. Her sister, who has suffered from gall-stones from childhood, was most sceptical as to the nature of the illness, because the pain did not seem to be severe enough, and no jaundice had supervened. The next day, I was able to produce, very triumphantly, a small stone, in shape exactly like a flint

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\*Read before the Bath and Bristol Branch.

implement of the prehistoric period ; and I found two more a few days afterwards. I do not know anything that inspires confidence more than the fulfilment of a prophecy like this, which you can prove so easily to a patient, and just at a time, too, when his gratitude for relief from the pain his enemy has caused has not vanished from his heart. By way of parenthesis, I would express the belief that gall-stones are not particularly uncommon in the young. I have lately attended a lad aged 16, who expelled twenty-seven stones in a week ; and I shall allude further on to a case which proved fatal in a man aged only 24.

It is interesting to note the occurrence of gall-stones in two members of a family, in one of whom the tendency to the disease had been so strong as to have existed from childhood. The worst attack this lady ever had was during last year, and it lasted about seven weeks. Vomiting and intense paroxysms of pain tortured her more or less the whole time ; the deepest jaundice prevailed ; and there was the most intense prostration. At last, the mouse that had troubled the mountain came forth, and a tiny one it was—not bigger than a bean ; and she had passed hundreds in her life, so that the ducts should have been fairly patulous. But I think the passage of the stone was probably hindered by catarrh of the ducts, from irritation produced by the presence of the stone, which was very rough and sharp. The patient was so constantly sick as to preclude any use of emetics. It was somewhat curious that the exciting cause of this attack was the vomiting attendant upon the progress of an uric acid calculus from the left kidney. The patient's being subject to both uric acid and hepatic calculi would seem to favor the opinion, that gout and biliary stones are closely related as effects of one common cause.

Another of my patients has passed quantities of uric acid calculi, and has suffered too from gall-stones, and is now the subject of granular kidney. She is also a female. Two or three patients also have been the victims of gall-stones, and regular gout.

Rather a rare occurrence has happened to two of my patients, both females—that of vomiting gall-stones. No doubt they were squeezed, by the action of the abdominal muscles in vomiting, back from the duodenum into the stomach, just as bile regurgitates from the same cause when people are sick, making them think they are

bilious, whatever that term may mean. According to works on liver diseases, it is extremely unusual for gall-stones to be ejected from the stomach, unless they have ulcerated their way through directly from the gall-bladder into the stomach. This obviously was not the case in the two instances I have mentioned.

I will now briefly relate a case in which five gall-stones about the size of peas were impacted in the ducts for six weeks. The patient, who had had transient attacks of pain from time to time, was seized with pain, not at all severe, in the right hypochondrium, extending to the back, and considerable dyspnœa, no doubt of an instinctive character. He was not sick, only nauseated. The pain subsided in twenty-four hours; but jaundice with clay-stools and dark urine, came on rapidly, with moderate fever. My diagnosis was catarrh of bile-ducts, and probably gall-stones. In a few days, I found a small piece of one, which settled the matter. Weeks, however, passed away, and there was no improvement. The patient lost much flesh, due conjointly, I should say, to imperfect nutrition and fever. Edema of the lungs and legs set in, and the breathing became very embarrassed, the patient having had a weak heart for years. Remedies of all kinds were of no avail. I began to feel very uneasy as to the result, my patient being beyond the prime of life. An emetic was suggested, but he was perfectly horrified at the idea, having always suffered very much when he was sick. But this plan was supported by the advice of one of my medical friends, and an emetic of sulphate of zinc was tried. It produced very little vomiting, and no bile was thrown up; but during the day some copious bilious motions, the result of an early dose of Carlsbad salts, were passed, and in them I found five stones, as the reward of his obedience to our wishes. My patient suffered, however, a good deal from the action of the emetic; and when, unfortunately, about a week afterwards, some more stones began their travels, he declined any further assistance from this source. After a week's waiting, I gave him fair doses of salicylate of soda and benzoate of ammonia, with almost immediate effect. The motions became very yellow, and several calculi passed; and the patient was quickly convalescent. He has passed a considerable number since.

I will now advance a step further, and mention a case in which jaundice prevailed to a greater or less degree for eighteen months,



with ultimate cure. The patient, a Yorkshire gentleman sixty-six years old, had lived somewhat freely and taken enormous exercise. A year before his hepatic troubles came on, he had some head affection, and was accordingly very strictly dieted; and to this restricted diet I really imputed his attack. After a long day's shooting, he was seized with agonizing pain in the epigastrium and vomiting, etc., and quickly became jaundiced. The motions were never of a right color again for a year and a half; the urine was always dark, and the skin deeply tinted. Occasionally the cuticle seemed to improve a little in color, and the urine to become lighter; but the clay color of the motions was invariable. I am quite sure that the urine and the skin can assume their natural color almost completely, and yet the obstruction to the flow of bile be as persistent as ever. The only explanation of this is diminished production of bile, through interference with the functions of the liver. Every few weeks, a paroxysm of pain and vomiting would come on, with great weakness; yet no stone could be discovered, and the most careful search was always made.

The patient lost flesh, the liver became large and hard, and as he had taken freely of spirits, commencing cirrhosis was suspected. There was occasional albumen in the urine, and the appetite became very poor. At last, eighteen months after the first futile attack, an awful paroxysm ensued—pain, vomiting, rigors, œdema of lungs and feet, dry mahogany tongue, fearful thirst and anorexia, and the deepest jaundice. It would be an interesting question why the jaundice deepened at this time. The sweats drenched his bed. Two and three weeks passed, and remedies were of no avail, except as palliatives to his sufferings. But one day, I found a slight change in the color of the stools, coincident with a cessation of pain. A day or two afterwards, I discovered the stone I now hand round. It has, of course, shrunk much by keeping, owing to its brittle structure. You will see that its ends have been ground off from rough treatment by the muscular coats of the gall-bladder and duct. I would search through a thousand evacuations, however odorous, to witness the pleasure and satisfaction which the announcement of my discovery gave to my patient and his devoted family.

I did not find another stone, and convalescence, though naturally

very slow, was complete. The oedema of lungs and legs faded away, and my friend has been shooting in the north this winter, the attack having taken place last March. For many days, he was at the point of death. One morning, after an awful rigor, I found him with a temperature of  $105\frac{1}{2}^{\circ}$  Fahr. Two days before the stone escaped, he became utterly collapsed, with intermitting irregular pulse and icy-cold extremities, and felt he was dying. Now, rigors and sweats are common in attacks of gall-stones; but I never saw such as these; and the fluctuations of temperature were remarkable. The extraordinary part of the case was the continuance of the rigors after the stone was gone: two, three and four times a day, he had a paroxysm, simulating ague of the most severe type. My heart sank within me, and I began to fear lest extensive suppuration was going on from injury sustained by the passage of the stone. But I poured in large doses of quinine and digitalis, with a sort of forlorn hope, and had the infinite satisfaction of finding the attacks growing less and less frequent and severe, until at last they ceased altogether. No pus could be detected by a minute and constant examination of the stools. I thought some might possibly escape from a suppurating gall-bladder. None having been found, I can furnish no more rational explanations of these terrible rigors than that they were probably due to profound disturbance of the sympathetic system, inducing violent vaso-motor storms. Be that as it may, the case is in very instructive contrast with one I will presently relate. As to the position the stone occupied so long before its final discharge, although it is possible it blocked the cystic duct, and by its large size pressed upon and occluded the hepatic duct, yet I think it most probably occupied the common duct itself; for, otherwise, I cannot account for the permanent want of color in the stools.

I will now call attention to a case of fatal obstruction of the common duct by a large calculus. The patient, aged 34, and very delicate, had had a great many attacks, and had passed some very large stones. Every time she became pregnant, the gall-bladder seemed to become irritable, and calculi were expelled. Her last attack came on when she was five months pregnant, and was most violent. Pain and vomiting were incessant, the jaundice intense, and rigors and sweats most prostrating. Hypodermic injection of morphia, thrice

daily, was the only means of relief, and kept her in comparative ease. For many weeks there was no change; but at last a stone escaped, and I hoped all would be well, although the patient was most exhausted. But, alas! another stone took the place of the one released, and the poor creature slowly but surely sank, worn out by suffering and exhausted by innutrition, although nourishing enemata had been freely resorted to. The stone, which was cone-shaped, was wedged into the duct, just under its narrowed ending in the duodenum. It was so fixed that I do not think any force, short of sufficient to rupture the duct, could possibly have dislodged it. Her violent sickness produced no effect upon its progress. The abdomen was extremely tender and tympanitic for some time before death; but no marked traces of peritonitis were found *post mortem*. Each stone was about  $2\frac{1}{2}$  inches in circumference.

I will now briefly sketch out a case of gall-stone, with ulceration of the gall-bladder and secondary hepatic abscesses. M. H., aged 60, an upholsteress, was admitted into the Royal United Hospital, Bath, on December 27th, 1877. Nine months before, she was suddenly attacked by excruciating pain all over the abdomen and back, accompanied by jaundice. The urine became dark, and the motions were described as dark also. She had six similar attacks afterwards, the last being attended by sickness. After this, she lost appetite and had pain after food. On admission, she looked pale, slightly yellow, and complained of weakness, anorexia, and a good deal of tenderness in the right hypochondrium, where the liver could be felt. The temperature that night was  $102^{\circ}$  Fahr. She had some emphysema and a little bronchial catarrh. The urine was turbid, with urates; no albumen. The bowels were more or less loose all the time she was in the hospital. The morning temperature was generally normal; but the evening temperature varied from  $100^{\circ}$  F. to  $104\frac{1}{2}^{\circ}$  Fahr., never being below  $100^{\circ}$  Fahr. The right lobe of the liver extended down below the umbilicus, but not across it, being peculiarly elongated, and the left normal. The right lobe enlarged considerably while the patient was under observation. It was immovable on inspiration. There seemed some slight extension of the liver area upwards in the right infra-axillary region. On February 18th, 1878, the evening rise reached to  $104^{\circ}$  Fahr., and, on the night of the 20th, a rigor occurred. The next day, there was a

little albumen. The pulse had up to this time kept remarkably normal. The patient had never experienced a rigor before, save the nervous shivering so common when a gall-stone is passing, and that only in the last attack. But now rigors took place pretty constantly, and the patient assumed a more asthenic aspect, the tongue being dry and the respirations hurried, with mucous râles in the lungs. The pulse, too, mounted—often being 115 or 120. She died exhausted on March 7th.

The diagnosis formed of the case was inflammatory mischief in the gall-bladder, from irritation of a calculus. It had been suggested that the case might be one of carcinoma of the liver; and the growth of the organ, and the fact that a case had been observed in the hospital with distinct nightly rises of temperature, lent some support to this view. But I never wavered in my opinion; and the onset of rigors not only strengthened me in it, but also informed me of the occurrence of suppuration. One would hardly have supposed at first there was much the matter with the patient; and it was only the careful registering of the temperature which gave gravity to her condition.

The *post mortem* examination fully justified the diagnosis. A large, not particularly rough, gall-stone, of the shape of the gall-bladder, had set up the most extensive ulceration of its mucous membrane, which in places were remarkably thinned, with large numbers of varicose vessels quite exposed. The opening into the cystic duct was obliterated, and its place occupied by a stellate scar. There were ten or twelve secondary abscesses in the right lobe of the liver, principally beneath its upper surface; one, the largest, holding about three ounces of pus, projected beyond the ordinary level, and probably accounted for the slight upward increase of hepatic dulness I had noticed before death. An explanation of the secondary abscesses in the liver is furnished by the fact that the cystic veins empties itself into the portal vein, thus forming a direct channel for the conveyance of pyæmic influences. A point worthy of remark was the immovability of the liver on inspiration, although it was large and unhindered by perihepatic adhesions. It is obvious how important this might have been, had an abscess existed in the lower part of the liver and invited operative interference. It was interesting, also, from a general pathological point of view, to

observe that the temperature ran up at the very commencement of a rigor. For example, immediately one began, the temperature was found to be 100° F.; and at the conclusion of the same, it was 103° F. The pulse also invariably ran up when the rigors ensued.

As to the cause of the gall-stone in this case, I found a deep sulcus running across the upper surface of the liver from right to left, just on a level with the neck of the gall-bladder. This furrow was no doubt due to the poor woman tying her clothes too tightly; and to this I am disposed to attribute the formation of the stones, the cystic duct being thus constantly more or less pressed upon.

Lastly, I would allude to a case, the nature of which I could not clearly make out, even with the aid of light borrowed from a *post mortem* examination. I would say, at the outset, that the opinion I formed of the case was that it was one of jaundice due to obstruction by a calculus. How far I was right, will be seen directly.

The patient, a laborer, aged 24, was admitted into the hospital on November 18th, 1878, and died on December 19th. He was taken with jaundice a year before, having been suddenly seized, while working in a damp place, with pain in the stomach and vomiting, lasting for three weeks. He was very yellow. He was in the Royal United Hospital a month, but the jaundice lasted until March. He worked on and off until August, when the vomiting and pain came on again, and the jaundice returned. The pain left him again in about five weeks, but the skin remained tinted until his admission, when he was considerably jaundiced. His legs had swollen on walking about, and were œdematous when he came in. He was very weak and short-breathed on exertion. His bowels were loose; the motions clear-colored. He had been accustomed to a good deal of beer. The chest was emphysematous; the spleen considerably enlarged; and the hepatic dulness extended nearly to a level with the umbilicus. The surface over the liver was quite smooth, and not noticeably tender. The urine was high-colored with bile, and was of specific gravity 1019. There was a slight rise of evening temperature, which subsided in a few days. With the exception of a little improvement in the urine and skin, he remained much the same until December 16th, when somewhat severe pain came in the abdomen, and his temperature rose to 101.6° F. During the night, he had a rigor lasting an hour and a half, and the temperature reached



104° F., and he complained of much pain and tenderness in the epigastric region. The skin was dry; the tongue coated as if with white paint; there was loss of appetite and great thirst; and he vomited a large quantity of coffee grounds-like fluid. The motions were loose and very light. The pain and vomiting increased, and the pulse and temperature remained high. Opium in large and frequent doses was given; but the patient gradually sank from the combined effects of peritonitis and hæmatemesis.

The *post mortem* examination revealed an extraordinary state of affairs. The gall-bladder contained about two drachms of thick bile; the cystic and common ducts were quite patulous and unoccupied by any calculus, although I could not squeeze the bile out of the bladder with even considerable force. The liver was very large, congested, and bile-stained, showed no alteration in its minute structure; but in the centre of it was a large cyst, containing half-a-pint of clear bilious fluid, and a large number of small dark gall-stones. The floor of this cavity was between the lobus quadratus and lobus Spigelii, and about an inch from the outer and lower surface of the lobes of the liver. It was very much thickened; and there was a layer of tough lymph, like chamois-leather, about two inches long, and an inch wide, adherent to it. This lymph was encrusted by a mass of biliary concretions, as big as a small Brazil nut, and was torn off with great difficulty. The hepatic duct was normal as far as the hilus, and a probe could be passed along several of its main branches, entering, in several instances, into the cyst at various parts of its walls. Most of these were very hypertrophied, as if they had had great difficulty in expelling their contents, and consequently had to be strengthened by physiological growth of their muscular coats. They also traveled a long way over the cyst walls. Some of the branches to the beginning of a hard mass of greyish fibroid tissue, which occupied the space between the floor of the cyst and the hilus itself, and the probe would go no further. I could not make out any branch in particular blocked by a calculus; but there can be no doubt that some were occluded, and those which we could trace into the cyst were much pressed upon by the fibroid thickening and the large mass of biliary concretions. The stomach contained blood; and the hilus and the adjoining peritoneal surfaces of the duodenum, etc., were in a state of acute inflammation. The

spleen was large. I should say that the wall of the cyst was considerably thickened, and to all appearance very muscular or fibrous from the peculiar rugose state it assumed. The thickened mass was evidently an indurated piece of liver-tissue, and probably the result of a chronic inflammatory process.

I shall be glad of the wider experience of the meeting to help me to explain this remarkable state of things. The patient's history seemed to favor the existence of a stone, perhaps in a large hepatic duct. This may have been impacted, and caused a dilatation of the duct behind it; the result being an enormously distended cyst. Calculi were then formed, and naturally took up a position on the floor of the cyst, and by continued irritation caused inflammatory changes, with deposit of lymph, and induration of the neighboring portion of liver-tissue. Or the reverse may have happened, and fibrosis of the piece near the hilus may have blocked some of the main branches of the hepatic duct; secondary dilatation may have ensued, and the gall-stones may have been quite a tertiary phenomenon. The Yorkshire proverb, "When in doubt, do neawt," ought, perhaps, to have suggested to me a discreet silence as to the cause of the patient's illness; but I am anxious to obtain information, and to do that do not object to display my ignorance. The coincidence of peritonitis and hæmatemesis is interesting; no doubt, however, the portal vein was pressed upon somewhat, and this explains the splenic enlargement and the hæmatemesis; and probably the peritonitis was due to vaso motor changes in the vessels at the hilus from pressure or irritation.

My year's experience has suggested to me many other points beyond those I have ventured to bring before you to-night. I would have spoken a few words about treatment, which is, after all, the great aim and object of all our professional labors. The causes of these painful maladies, too, are very obscure; and I would especially call attention to an idea—as to whether locality has not some share in their production—which certainly has forced itself upon my consideration. I must ask your pardon for the hurried, imperfect, and disjointed remarks I have put before you. My only desire has been to call attention to a series of cases, far more formidable than gall-stones usually produce, yet reminding us, very strikingly, that what is generally but a trivial, though very painful, disorder, may from

time to time unexpectedly alter its comparatively benign-character as a freer from a lurking enemy, and become, itself, one of the most cruel and deadly of the foes by which fallen human nature can be attacked and destroyed.—*British Medical Journal*.

## THE OCCURRENCE OF INDIGO-PRODUCING SUBSTANCES IN THE URINE.

Professor J. M. PURSER recently made a communication on this subject to the Irish College of Physicians. The paper is so important that we give it here in abstract:—

In the digestive tube two kinds of processes take place:—1. Digestive processes effected by the agency of unorganized ferments formed by the various glands; 2. Putrefactive processes effected by the action of organized germs which are swallowed with the food.

Those processes of putrefaction or fermentation in which hydrogen is developed cannot occur so long as the reaction is acid; consequently, in the stomach under normal circumstances they are not met with, but in cases where from diseases the acid secretion is lost, putrefaction may occur with development of  $\text{H}_2$ ,  $\text{CO}_2$ ,  $\text{HS}_2$ , etc.

In the small and upper part of the large intestine, where the secretion is alkaline, putrefactive processes undoubtedly occur.

The pancreas is the chief digestive gland whose secretion is active in the intestine. Under its influence starch is converted into dextrin and sugar, fats are split into glycerin and fatty acids, and albumins are transformed successively into a globulin-like body and peptones. From these are further formed leucin, tyrosin, hypoxanthin, aspartic acid, etc. These products of pancreatic digestion can be obtained in experiments outside the body when precautions are taken to prevent the access of putrefactive germs, and in the process there is no development of  $\text{H}_2$ ,  $\text{HS}_2$ , or of ill-smelling substances. If, however, the germs of putrefaction are allowed to contaminate the digesting mass, a number of products are formed

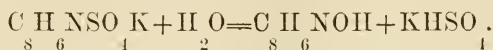
besides those mentioned, the more important of which are indol, phenol,  $\text{H}_2$ ,  $\text{H}_2\text{S}$ , and ammonia.

In the intestine and in putrefaction carried on outside the body, but in presence of digestive ferments, the process advances much more rapidly than under the action merely of putrefactive germs. The reason of this is that the earlier stages of putrefaction and of digestion are the same or nearly so. These stages are gone through more quickly by the digestive than by the putrefactive ferments, and consequently the pure putrefactive actions can start from a more advanced stage than when they have themselves to perform the entire process.

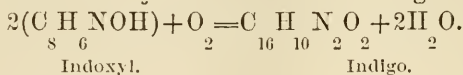
It is of interest to know to what degree the putrefactive processes occur during life, and the fact that some of the products of putrefaction are absorbed from the intestines, and appear, more or less altered, in the urine, seemed for a time to promise a mode of determining the degree of putrefaction in the interior of the body. Although further research has shown that the condition of the urine is not such a certain index as was supposed of what is going on in the intestines, yet, nevertheless, there are many facts of great interest connected with the elimination by the kidneys of the products of intestinal putrefaction.

One of the most remarkable products of intestinal putrefaction is indol. This substance is crystalline, melts at  $52^\circ$ , and has the chemical composition represented by the formula  $\text{C}_8\text{H}_7\text{N}$ . It has a disagreeable faecal odor. It can be got by ordinary putrefaction of albumins, by heating albumin with water to  $200^\circ$ , or by fusing it with caustic alkali. It cannot be got by the action of acids or reducing means. This substance, when formed in the intestine or introduced in the food, or when injected into the subcutaneous tissue, reappears in the urine as a body which, when acted on by acids and oxidizing means, is converted into blue indigo. This indigo-forming substance was at first supposed to be identical with indican, the indigo-forming substance of plants, and which is a glucoside. Hoppe-Seyler, however, threw doubt on this by showing that the vegetable indican is much more readily decomposed than the indigo-forming substance of the urine. Baumann and Brieger have recently studied with great success this question. By feeding a dog with indol they

obtained large quantities of the urinary indigo-forming substance, and find that it is the alkaline salt of indoxylsulphuric acid, the ether sulphuric acid of hydroxylized indol. It is a crystalline substance, having the formula  $\text{C}_8\text{H}_6\text{NSO}_4\text{K}$ . By the action of hydrochloric acid in the presence of water it is split up into indoxyl and sulphuric acid—



By oxidation the indoxyl is converted into indigo—



This substance is greatly increased in the urine in certain morbid conditions—such as obstructions in the small intestine, peritonitis, and paralytic conditions of the bowel. It is excreted in large quantities also in many cachetic conditions which do not indirectly involve the intestine. It is not increased in simple constipation or when the obstruction is seated in the large intestine, unless this obstruction lead to peritonitis or paralytic distension of the small intestine. It is easily tested for by the method of Jaffé. Equal parts of urine and hydrochloric acid are mixed together; then a saturated solution of common bleaching salt is added cautiously, drop by drop, until the maximum of blue coloration is obtained. If the urine be then shaken up with chloroform the indigo may be extracted, and a fair estimate of its quantity arrived at.

Another substance developed in the intestine by putrefaction is skatol. This body, recently discovered by Brieger, has as yet been found only in human faeces. It is closely allied to indol, and has, like it, a faecal smell. It is crystalline, but melts only at  $93.5^\circ$ . The chemical composition is not yet perfectly known, but it is probably  $\text{C}_{10}\text{H}_{11}\text{N}$ . It is hence an ethyl indol. It is not known whether this substance appears in the urine. When injected into the subcutaneous tissue of rabbits, the urine gives a violet precipitate with hydrochloric acid and chloride of lime. This is, however, not indigo, and does not sublime.

In the urine of the herbivora (cow, horse, etc.) a substance exists in considerable quantity which, on treatment by acids, yields phenol; this phenol-yielding substance exists also in the urine of men. It



has been shown that phenol is formed in the putrefaction of albumen, and Brieger has found phenol in the intestinal contents. Baumann has shown that this and the phenol which is formed in the intestine consists mainly of paracressol, and only in small proportion of actual phenol; while Weyl has shown that paracressol results from the putrefaction of pure tyrosin. In a recent paper Baumann has shown that when an animal is fed with paracressol, while parts of this substance passes into the urine as alkaline paracressol sulphuric acid, a considerable quantity is converted in the system into paroxybenzoic acid, and that paroxybenzoic acid in the system or by putrefaction is in part split into phenol and carbonic acid. Hence the phenol which occurs in the urine as alkaline phenol sulphate, is probably derived from the further putrefaction of the tyrosin formed in the intestine, and passes through the stages of paracressol and paroxybenzoic acid. The method of examination of the urine for phenol consists in acidulating strongly with sulphuric or hydrochloric acids and distilling. To the distillate bromine water is added as long as any precipitate or turbidity forms. If phenol be present a yellowish-white crystalline precipitate of tribromide of phenol is formed, which may be collected and weighed, and from which it is easy to calculate the quantity of phenol present. It was at first supposed that the quantities of the indigo-forming and phenol-forming substances present in the urine ran parallel to one another. This has, however, been shown by Brieger not to be the case; and in some cases in which the indigo-forming substance was present in excessive quantity the writer has found phenol altogether absent.—*Dublin Journal of Medical Science*.—*Med. Times and Gazette*.

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## HOW TO KILL BACTERIA.

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In a lecture given before the Berlin Medical Society, December 3, 1879, Dr. Wernich (who, as our readers may remember, was formerly a medical professor in Japan) offered some interesting remarks, *Ueber Bacterientödtung*, or, as we have translated it above, on how

to kill bacteria. He begins by pointing out that we must have some certain method of deciding between dead and living bacteria, and that as in the lowest of these organisms the only vital function which we can recognize as performed by them is that of unlimited multiplication under appropriate conditions, their reproductive capacity must be taken as the test of their vitality. A fallacy, however, comes in here which complicates the problem—if the cultivating fluid is not rightly chosen the bacteria fail to multiply. With care, however, this difficulty may be avoided, and after a sufficient preparatory training Dr. Wernich believes that by a modified form of Klebs's "*fractionirte Cultur*," which he terms the bacterioscopic method, the distinction between living and dead bacteria may be made with certainty. The principle is simple. If, after rigorous exclusion of all possible causes of impurity from without, a drop of the bacterial fluid to be tested causes cloudiness in an appropriate cultivating medium, which cloudiness the microscope proves to depend on the presence of multitudes of bacteria, and if this experiment can be repeated over and over again by cultivating the new bacteria in fresh media, the first bacteria were living; if no cloudiness occurs under these conditions, they were dead. We should state here that Dr. Wernich's experiments on this subject were partly made in Professor Cohn's laboratory at Breslau, the special organism investigated being the *Micrococcus prodigiosus*, or blood mould of the ancients. The research is given in detail in *Virchow's Archiv*, Band 78.

Assuming, then, that we can distinguish between dead and living bacteria by the reproductive capability of the latter, how can we kill bacteria and prevent their reproducing their kind? Dry heat seems to be one of the most powerful physical agents for effecting this. According to Wernich, the bacteria of putrefaction are killed by a temperature of 130° to 150° Cent. even in three to five minutes. The *Micrococcus prodigiosus* is rendered absolutely sterile at a temperature of only 75° to 80° Cent. But some organisms, for example the *Bacillus subtilis* of hay infusion, exhibit enormous resistance even to the protracted action of heat (Cohn), and, at any rate in the case of the hay bacillus, it is the spores which still retain their vitality even after long boiling. The presence or absence of spores will, therefore, to a great extent determine whether a given species

of micrococcus or bacterium resists destruction by heat, chemical agents, etc., or not.

It is well known that certain substances—sugar dialyzable albuminates, and the elements of potassium, phosphorus, magnesium, and sulphur—are necessary to the multiplication of bacteria, but Dr. Wernich mentions another less known fact, namely, that if any one of these substances be absent from the nutritive fluid, the bacterial spores, instead of multiplying, pass into a state of rest (*Dauerzustand*), in which they remain indefinitely. Dryness has the same effect, and, according to Koch, the spores of the *Bacillus anthracis* or bacillus of malignant pustule can remain in the dry state for years, be moistened and dried again without loss of reproductive power. Hence, if in any locality these spores have once developed, the chances of the disappearance of the disease there are very small. On the other hand, excess of moisture destroys bacteria with great certainty. The development of *Bacillus anthracis* is checked by distilled water, and, as our readers may remember, Professor Virchow, in his lecture on the Plague (*Medical Times and Gazette*, volume i. 1879, page 256), inclined to the belief that the report was true that “plague germs” lose their infective power by immersion in water.

The effect of light on micrococci is absolutely *nil*; they get on equally well with and without it. On the other hand, it is said that at the positive pole of a moderately strong galvanic current they always die, while at the negative pole they develop to a slight extent. It would take up too much space to enumerate all the gases, acids, salts, and organic substances which are reported to destroy bacteria outside the body. That they do so *if brought into intimate contact* with them is scarcely doubtful; the important point is to find poisons that will kill bacteria within the human organism without injuring the latter. It is questionable whether at present we possess any such. Dr. Wernich puts the question: Why do bacteria not live for ever?—why, with an apparent sufficiency of nutritive material, do they die? Why do infectious diseases like small-pox and scarlet fever, which are probably due to organisms, last only a certain time? The answer seems to be, that “it is the products of the tissue change of the living bacteria which causes their ultimate destruction.” About four years ago Salkowski found

that bacteria would not propagate in some three-years-old ascitic fluid which had gone through all the stages of putrefaction. Since then this has been explained by the discovery of carbolic acid by Baumann, of skatol (*Medical Times and Gazette*, 1879, vol. i., page 154) by Brieger, of hydrocinnamic acid and phenylacetic acid by E. and H. Salkowski as products of putrefactive processes i. e., of bacterial tissue change.

These bodies, as well as indol, which also develops under these conditions are intense bacterial poisons; and while skatol is the strongest of them all, carbolic acid is the weakest. Wernich has found that 1 part indol per 1000 of fluid prevents putrefaction, whereas 5 parts carbolic acid per 1000 are required; 0.4 skatol per 1000 prevents the propagation of bacteria, but carbolic acid must be 5 per 1000 strong; lastly, 0.5 skatol per 1000 *kills* bacteria, while we must allow a 1 per 50 solution of carbolic acid to remain long in contact with them to produce the same effect. Yet Dr. Wernich does not think carbolic acid will lose its position as an antiseptic in consequence. Its solubility and cheapness will prevent that: some of the other substances just named take 2000 parts of water to dissolve them.

The practical question now suggests itself (Dr. Wernich supposes that it is put to him)—If we had a patient ill of disease proved to be due to the bacteria of putrefaction (*Fäulnisbakterien*) ought we to give him, say, indol? Dr. Wernich answers, “No; our knowledge of the diffusion and action of it and similar drugs within the body is at present as good as *nil*. We can scarcely conceive that the intimate contact of drug and bacteria necessary, as experiment shows, for the destruction of the latter can occur there.” Is there no hope, then, in this direction? Dr. Wernich thinks that we should carefully investigate the conditions of development of those bacteria which can enter and live in our bodies; and, secondly, that at present we should devote our chief attention therapeutically to keeping the bacteria out of the body, rather than attempting to destroy them when they have once entered it. As in surgery so in medicine, exclude the germs if possible; and if sceptics say that there are no germs, we can fall back on the dictum of the great botanist Naegeli (*Die niederen Pilze in ihren Beziehungen zu den Infektionskrankheiten*; Munich, 1877), that the poisons which

produce disease cannot be gases or simple chemical bodies, and *must* be some sort of *organized* material.

The above is but a brief abstract of Dr. Wernich's lecture, yet we hope it may be found not altogether wanting in interest or suggestiveness.—*Med. Times and Gazette*.

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*Doctors Sharing the Profits of Prescriptions.*—A bill has been introduced into the California Legislature to put an end to the custom of doctors sharing in the profits of the apothecary.

This practice is not wide-spread in this State, but it should be condemned everywhere. Drugs are precious enough in the eye of the apothecary, and a severe enough drain on the patient's pocket, without being loaded with an additional tariff for the benefit of the doctor.

It is easy enough to understand how such a custom originated, but in its true interpretation it is a combination of druggist and physician, against the unsuspecting patient, whereby the patient is made to pay a tariff, however small, which he would indignantly refuse if he was in the secret.

The doctor who is paid a percentage by the druggist for his prescriptions is little more than a solicitor for custom for the druggist, and is a party to a nefarious transaction which will make his patients suspicious of his professional rectitude sooner or later.

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*Iron and Digitalis.*—It is often very desirable to give these remedies together. A common way has been to administer the ammonio-citrate of iron and tincture of digitalis. According to Mr. F. Y. Livy, however, in the *British Medical Journal*, a mixture of tincture of muriate of iron, tincture of digitalis, and dilute phosphoric acid, is the best formula. The acid prevents the formation of a tannate, and is useful in case there is any stomachic disorder.

We have tried the above mixture, and find it without precipitate, as described.—*New York Medical Record*.




## EDITORIAL.

### NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED  
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M. J. DEROSSET, M. D.,  
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### ELIGIBILITY TO MEMBERSHIP IN THE STATE MEDICAL SOCIETY.

What constitutes eligibility to membership in the State Medical Society is a question just now of much practical interest, and one which must be settled at its approaching meeting. It has been many times indicated in the JOURNAL what our interpretation of the law is, but it may be proper to repeat, that to be eligible to membership in the State Medical Society, the applicant must either have graduated before the law creating the Board of Medical Examiners (April 15th, 1859) or he must have the license of the Board of Medical Examiners.

It must be borne in mind that the State Medical Society as well as the Board of Medical Examiners derive their authority from the State. The same act of incorporation includes both bodies, so intimately are they related to each other. The Board of Examiners law was enacted at the solicitation of the State Medical Society, and the members composing the Board are selected by ballot from the

members of the State Society, and that "whenever any member of this Board shall cease to be a member of the Medical Society of the State of North Carolina, either by resignation or expulsion, his office of Medical Examiner shall be thereby vacated."\* So much for the authority of the Board of Examiners.

Since the enactment of the Board of Health law, the question of eligibility recurs, as the law says County Boards of Health must be composed of the Chairman of County Commissioners, Mayor of the county town, County or City Surveyor, and *physicians eligible to membership in the Medical Society of North Carolina*.

As the Medical Society of the State is empowered to make its own rule of action, we would naturally expect to see the test of membership clearly laid down in its constitution. By reference to the latest edition of it we find the requisites of membership defined as follows :

Sec. 2, Article III of the Constitution says : "The permanent members shall consist of such regular physicians as shall be admitted on motion by a member : *Provided*, he shall receive two-thirds of the votes present ; and the member thus admitted shall be entitled to all the privileges of the Society. He must first sign the Constitution and By-Laws and pay the assessment."

It will be observed that not a word is here mentioned of the license test.

The very year after the Board of Examiners was established, however, we find a rule of action entered upon the Transactions of the State Medical Society, as follows :

"The Committee [on Credentials] further solicited instruction from the Society as to the course they should pursue towards those gentlemen, graduates elsewhere, who have not been before the Board of Medical Examiners for the State, and who may be present for the purpose of becoming members of the Society. After deliberation by the Society, Dr. Saichwell moved the following resolution. Adopted :

"*Resolved*, That those gentlemen, subject to the law establishing a Board of Medical Examiners for the State, who may present themselves at this or any future meeting for membership into the Medical Society of the State of North Carolina ; and who may not

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\*Medical Journal of North Carolina, April, 1859, p. 195.

have passed an examination before said Board, may be admitted members of the Society; *Provided*, that they obtain the certificate of said Board, at its meeting next succeeding, and thereafter sign the Constitution of said Society.”\*

It will be seen that the State Society from the very first held to the position of the license test, and that the necessity for the resolution above quoted rested in the fact that the Board of Examiners then held their meetings alternately at Morganton and Raleigh, and not at the same time and place as the State Medical Society, as now established by law, and application for membership would be considered, provided that at the first meeting of the Board they secured their license. This, therefore, was only a provisional membership, having for its condition the license of the Board.

The foregoing has been the rule of the Society ever since, and it is fresh in the minds of members that applicants for membership are only admitted to participation in the discussion of the Society previous to their licensing, by a special resolution to that effect. It will be remembered that this was done in Greensborough last year on the motion of Dr. Walter C. Murphy, of Pender.

Our investigation into this question covers all the available reference at our command, and reveals the fact that our Constitution needs an early amendment to cover this very important ground. We do not pretend to say what would be the legal interpretation of the rules of action of the State Society as expressed in the written law, but we are certain that we express the opinion of the great body of the Society when we say the test of eligibility to membership is the license of the Board of Medical Examiners.

It may be proper to add in the above connection that the State Board of Health adopted the license test in organizing County Boards, as there was no doubt expressed by any member that this was the Society's test for eligibility.

We have alluded to this subject to call the attention of the Society to the necessity of legislating upon it at the approaching meeting in May.

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\*Transactions of Washington meeting, 1850, p. 1.

## REVIEWS AND BOOK NOTICES.

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HEADACHES: THEIR NATURE, CAUSES AND TREATMENT. By WILLIAM HENRY DAY, M. D., M. R. C. P. L., &c. &c. Third Edition. With Illustrations. Philadelphia: Lindsay & Blakiston. 1880. Pp. 322.

This is a most instructive work, and the author has succeeded in so classifying headaches into groups that the treatment of the subject is made quite satisfactory. Why a book should be written on the subject of headaches when we find such difficulty in dissociating it from the many diseases of which it is only a symptom, is best understood by following the author through his treatise. Dr. Day is one of those physicians who believes that our present civilization has brought upon our unfortunate generation an increasing number of nervous diseases. We must not doubt it, but we feel quite happy in the thought that we live in the slack-water, and escape the penalty visited upon our progressive neighbors.

"By the term headache" the author says "we mean to signify pain in the head, accompanied with intolerance of light and sound and incapability of mental exertion, a state, from whatever cause arising, in which the brain temporarily prostrated and disturbed, in proportion to the cause and intensity of the suffering. Thus many headaches depend primarily on a disturbance in the cerebral structure, on a loss of balance in the relations of the nervous force and vascular supply, or on some intricate phenomena of the mind, which increase the sensibility of the brain, and disturb its functions. Then follows sympathetic disturbance in the digestive organs, which, reacting on the brain, increases all the symptoms for a time; but soon, from the process having advanced further, or for some change ensuing in the current of the circulation, the morbid sensibility of the brain abates, and the headache vanishes." Pp. 25 and 26.

The following heads are discussed: Headache of cerebral anæmia and hyperæmia; Sympathetic headache; Headache from cerebral congestion, and from plethora and increased vascular action; Headache from exhaustion; Nervo-hyperæmic headache; Organic or structural headache; Toxæmic headache; Arthritic or gouty

headache ; Headache of advanced life. Extracerebral headache. Rheumatic headache ; Headache from affection of the periosteum ; Neuralgic headache. Headaches of Childhood.

The treatment laid down is exceptionally good, making the book of practical value to the physician.

### CHANGES IN PUBLISHING FIRMS.

MESSRS. LINDSAY & BLAKISTON.—We were misled by our information as to the change made in this firm. Mr. Presley Blakiston has bought the retail business only, and the old firm still flourishes and prospers as their ability and generosity entitle them.

Mr. H. C. LEA retires from the business he has so long and successfully conducted. The new firm is Henry C. Lea, Son & Co., and the new management falls into the hands of younger men who have long been familiar with the methods of the old firm.

*Vaccinia Gangrenosa*—Mr. Jonathan Hutchinson described a case of gangrenous vaccination, before the *Royal Medical and Chirurgical Society*, exhibiting the body of the dead child. The infant had been vaccinated three months before death from the arm of a healthy child. Three other children vaccinated at the same time from the same source took no hurt. On the eighth day after vaccination a papular and vesicular rash appeared over the trunk, which rapidly assumed a sloughing character. The eruption was at first taken for small-pox, and when death took place a fortnight later an inquest was held on the case, for it was then thought to be syphilis. But Mr. Hutchinson pointed out that its evolution as well as its characters were not those of syphilitic infection, and he considered it to be a case of true vaccinia passing to a gangrenous condition—a condition he had sometimes observed to take place in varicella. The vaccine marks in the arm were natural.—*London Lancet*.



## CURRENT LITERATURE.

### BIOLOGY OF THE AMERICAN OYSTER.\*

It is singular that up to the time of this contribution by Mr. W. K. Brooks almost nothing was known of the development of the American oyster, all of our knowledge on the subject reaching us through German, French, Russian and English embryologists.

"All the published papers upon the subject state that the eggs are fertilized inside the body of the parent shell until they are quite well advanced in development, and provided with shell of their own; that they swim about after they are discharged from the parent until they find a place to attach themselves, but that they undergo no change of structure between the time when they become fixed. Misled by these statements, which are not true with our species. I opened numbers of oysters during the summer of 1878, and carefully examined the contents of the gills and mantle chambers, but found no young oysters. I concluded that the time during which the young are carried by the parent must be so short that I had missed it, and I entered upon the work this season with the determination to examine the adult oyster every day, through the breeding season, in search of young, and at the same time to try to raise the young for myself by artificially fertilizing the eggs after I had removed them from the body of the parent.

"I met with complete success with the second method from the beginning, and succeeded in raising countless millions of young oysters, and in tracing them through all their stages of development until they had acquired all the characteristics which European embryologist have described and figured in the young of the European oyster at the time it leaves its parent to become fixed for life."

Mr. Brooks established himself about near Crisfield on the 21st of May. He opened a dozen fresh oysters and found three females with their ovaries filled with ripe ova, and one male with ripe spermatozoa. He mixed the contents of the reproductive organs of these four oysters, and within two hours after the commencement

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\*Development of the American Oyster. By W. K. Brooks, Associate in Biology, John's Hopkins University, Baltimore, Md., in Report of the Commissioners of Fisheries, Maryland, 1880.

of the first experiment, learned by the microscope that the attempt at artificial fertilization was successful, and that nearly all of the eggs had started on their long path towards the adult form. Careful examination of the gills and mantles of these oysters was made, but neither then nor any subsequent time were any fertilized eggs or young found inside the parent shell. Mr. Brooks has accumulated enough evidence to show beyond the possibility of doubt, that so far as the oyster of Chesapeake Bay are concerned, that the eggs are fertilized outside the body of the parent, and that during the power which the young European oyster passes inside the mantle cavity of its parent, the young of our oyster swims at large in open ocean.

“*Anatomical Sketch.*—The general structure of an oyster may be roughly represented by a long narrow memorandum book, with the back at one of the narrow ends instead of at one of the long ones. The covers of such a book represent the two shells of the oyster, and the back represents the hinge, or the area where the two valves of the shell are fastened together by the hinge ligament. This ligament is an elastic, dark brown structure, which is placed in such a relation to the valves of the shell that it tends to throw their ends a little apart. In order to understand its manner of working, open the memorandum book at a place between its leaves, close to the back, a small piece of rubber to represent the ligament. If the free ends or the cover are pulled together the rubber will be compressed and will throw the covers apart as soon as they are loosened. The ligament of the oyster-shell tends by its elasticity to keep the shell open at all times, and while the oyster is lying undisturbed upon the bottom, or when its muscle is cut, or when the animal is dead or dying, the edges of the shell are separated a little.

“The shell is lined by a thin membrane, the mantle, which folds down on each side, and may be compared to the leaf next the cover on each side of the book. The next two leaves of each side represent the four gills, the so-called “beard” of the oyster, which hang down like leaves in the space inside the two lobes of the mouth. The remaining leaves may be compared to the body at *visceral mass* of the oyster.

“Although the oyster lies upon the bottom with one shell above

and one below, the shells are not upon the top and bottom of the body, but upon the right and the left sides. The two shells are symmetrical in the young oyster, but after it becomes attached the lower or attached side grows faster, than the other, and becomes deep and spoon-shaped, while the free valve remains nearly flat. In nearly every case the lower or deep valve is the left. As the hinge marks the anterior end of the body, an oyster which is held on edge with the hinge away from the observer and the flat valve on the right side, will be placed with its dorsal surface below, its anterior end away from the observer, and the posterior end towards him, and its right and left sides on the right and left hands respectively.

“In order to examine soft parts, the oyster should be opened by gently working a thin flat knife blade under the posterior end of the right valve of the shell, and pushing the blade forwards until it strikes and the strong adductor muscle, which passes from one shell to another and pulls them together. As soon as this muscle is cut the valves separate a little, and the right valve may be raised up and broken off from the left, thus exposing the right side of the body. The surface of the body is covered by the mantle, a thin membrane which is attached to the body over a great part of its surface, but hangs free like a curtain around nearly the whole circumference. By raising its edge, or gently tearing the whole right half away from the body, the gills will be exposed. These are four parallel plates which occupy the ventral half of the mantle cavity and extend from the posterior nearly to the anterior end of the body. Their ventral edges are free, but their dorsal edges are united to each other, to the mantle and to the body. The space above or dorsal to the posterior end of gills, is occupied by the oval, firm, adductor muscle, the so-called “heart.” For some time I was at a loss to know how the muscle came to be called the heart, but a friend told me that had always supposed that this was the heart, since the oyster dies when it is injured. The supposed “death” is simply the opening of the shell when the animal loses the power to keep it shut. Between this muscle and the hinge the space above the gills is occupied by the body, or *visceral mass*, which is made up of the light colored reproductive organs and the dark colored digestive organs, packed together in one continuous mass.

“If the oyster has been opened very carefully, a transparent crescent-shaped space will be seen between the muscle and the visceral mass. This space is the pericardium, and if the delicate membrane which forms its sides be carefully cut away the heart may be found without any difficulty, lying in this cavity, and pulsating slowly. If the oyster has been opened roughly, or if it has been out of water for some time, the rate of beating may be as low as one a minute, or even less, so the heart must be watched attentively for some time, in order to see one of the contractions.

“The heart is made up of two chambers, a loose spongy transparent *auricle*, which occupies the lower part of the pericardium, and receives blood from the gills through transparent blood-vessels, which may be usually seen without difficulty running from the gills towards the heart, and a more compact white *ventricle*, which drives the blood out of the pericardium through transparent arteries, which are usually quite conspicuous.

“The visceral mass is prolonged backwards over the pericardium and the adductor muscles, and here contains the rectum surrounded by prolongations of the white reproductive organs. Still farther back, on the middle of the posterior face of the adductor muscle, is the anus, a long vertical slit, opening into the space between the lobes of the mantle and above the posterior ends of the gills.

“In front of the gills, that is between them and the hinge, there are four fleshy flaps—the lips—two on each side of the body. They are much like the gills in appearance, and they are connected with each other by two ridges which run across the middle of the body close to the anterior end, and between these folds is the large oval mouth, which is thus seen to be situated, not at the open end of the shell, but as far away from it as possible. As the oyster is immovably fixed upon the bottom, and has no arms or other structures for seizing food and carrying it into the mouth, the question how it obtains its food at once suggests itself. If a fragment of one of the gills is examined with a microscope, it will be found to be covered with very small hairs, or *cilia*, arranged in rows. Each of these cilia is constantly swinging back and forth, with a motion something like that of an oar in rowing. The motion is quick and strong in one direction and slower in the other. As all the cilia of a row swing together, they act like a line of oars, only they are

fastened to the gill, and as this is immovable, they do not move forwards through the water, but produce a current of water in the opposite direction. This action is not directed by the animal, for it can be observed for hours in a fragment cut out of the gill, and if such a fragment be supplied with fresh sea water, the motion will continue until it begins to decay. While the oyster lies undisturbed on the bottom, with its muscle relaxed and its shell open, the sea water is drawn on to the gills by the action of the cilia, for although each cilium is too small to be seen without a microscope, they cover the gills in such great numbers that their united action produces quite a vigorous stream of water, which is drawn through the shell and is then forced through very small openings on the surfaces of the gills into the *water tubes*, inside the gills, and through these tubes into the mantle cavity, and so out of the shell again. As the stream of water passes out through the gills the blood is areated by contact with it. The food of the oyster consists entirely of minute animal and vegetable organisms and small particles of organized matter. Ordinary sea water contains an abundance of this sort of food, which is drawn into the gills with the water, but as the water strains through the pores into the water tubes, the food particles are caught on the surface of the gills by a layer of adhesive slime which covers all the soft parts of the body. As soon as they are entangled the cilia strike against them in such a way as to roll or slide them along the gills towards the mouth. When they reach the anterior ends of the gills they are pushed off and fall between the lips, and these again are covered with cilia, which carry the particles forwards until they slide into the mouth, which is always wide open and ciliated, so as to draw the food through the œsophagus into the stomach. Whenever the shell is open these cilia are in action, and as long as the oyster is breathing a current of food is sliding into its mouth.

The cilia and particles of food are too small to be seen without a microscope, but if finely powdered carmine be sprinkled over the gills of a fresh oyster, which has been carefully opened and placed in a shallow dish of sea water, careful observation will show that as soon as the colored particles touch the gills they begin to slide along with a motion which is quite uniform, but not much faster than that of the minute hand of a watch.



This slow, steady, gliding motion, without any visible cause, is a very striking sight, and with a little care the particles may be followed up to and into the mouth.

In order to trace the course of the digestive organs, the visceral mass may be split with a sharp knife or razor. If the split is pretty near the middle of the body, each half will show sections of the short, folded œsophagus, running upwards from the mouth, and the irregular stomach, with thick semi-transparent walls, surrounded by the compact, dark greenish liver. Back of the liver and stomach the convoluted intestine will be seen, cut irregularly at several points by the section.

The coils of the intestine are imbedded in a light-colored mass of tissue—the reproductive organ—which forms the greater part of the visceral mass. The reproductive organ varies greatly according to the season, and forms most of what is known as the “fat” of the oyster.

There are no accessory organs of reproduction, and the position, form and general appearance of the reproductive organ is the same in both sexes. There is no characteristic by which a male oyster can be distinguished from a female without microscopic examination. As the reproductive organ has an opening on each side of the body, it is usually spoken of as double, but in the adult oyster it forms one continuous mass, with no trace of a division into halves, and extends entirely across the body and into all the bends and folds of the digestive tract.

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*Traumatic Epilepsy.*—Dr. Althaus, in the course of a discussion on Trephining for Traumatic Epilepsy at a recent meeting of the *Royal Medical and Chirurgical Society* said: “From fourteen years experience at a hospital devoted to epilepsy, out of 3000 cases he had not seen one presenting injury of the cranial bones with depression, and in cases where a history of previous injury suggested recourse to trephining, he had found relief and cure follow the administration of large doses of iodide of potassium.”

## HAHNEMANIA.

The following is a specimen of the letters which were elicited by my article on "Remedies of Vegetable Origin :"

"THE MANHATTAN MONTHLY,

PHILADELPHIA, March 25, 1880.

*Dear Doctor*—I am very glad to see that you have been reading a homœopathic work by your article on 'Pulsatilla' in the *Chicago Medical Gazette*. In Hahnemann's *Materia Medica*, translated into English nearly fifty years ago, you will find that it was used for dysmenorrhœa and many other symptoms by Hahnemannians. No objection to your using or publishing all such facts, but it would look better to give the proper authority due credit for the same.

Yours very respectfully,

B. W. J., Business Manager."

My article was simply a record of individual and independent experience with, and an effort to revive the use of drugs which had fallen somewhat into disuse, each one of which, except, perhaps, cactus, is as old as the adamantine hills. Even if it had been possible, it would have been unnecessary in such an article to go back to the time when these agents were first used in medicine, and I believe to do so would elude the historical clairvoyance of Hahnemannian hallucinations. I thought I had certainly gone pretty far back when I mentioned the names of Dioscorides and Pliny. It is certainly a medico-historical convenience to be able to refer everything to Hahnemann. In early childhood I thought everything originated with my grand-mother; but since then I have been told that *she* had a mother and a grand-mother too!

It is a singular fact that the lawyer who experienced such relief from his headaches, from pulsatilla, should be almost persuaded by a professor in one of our homœopathic colleges not to use it because, he said, it was a woman's remedy! Pulsatilla is like an axe. Medicine has always used its edge. Hahnemann reversed the process and his disciples are trying to chop with the handle.

Will some one be good enough to define homœopathy? I do not ask for a biographical sketch of Hahnemann, who is falsely accredited with its authorship, nor an exhibition of so well known and typical a disease as Hahnemannia. The reason I ask is that I

cannot understand how a system which is said to be founded on an inflexible and universal law should differ so widely when applied to practice by its advocates.

Only this week I attended a lady patient who had been nearly narcotized by small-doses-frequently-repeated of opium administered by a homœopath whose medical skill is lauded to the skies. Not long ago I attended a young man who had been badly salivated by *mercurius dulcis*. The dose was infinitesimal, of course. During the past year I have several times seen bromism cinchonism and narcotism in the families of homœopathic practitioners of the best standing. Why not abandon every "pathy" at once and stand upon the broad platform of classical medicine? Classical cosmopolitan medical art is as constant and as true as the laws of harmony. Though "sometimes impertinently, often ignorantly, often carelessly, called allopathy, it appropriates everything from every source that can be of the slightest use to anybody who is ailing in any way, or is like to be ailing from any cause." Hahnemann was probably honest in his effort to inaugurate a new method or organon of medical thought and practice. The times in which he lived may have afforded him ample justification. It augurs ill, however, for the ultimate triumph of his theories, when we think that they, like mysticism, animal magnetism, Brunonianism, Broussaisism, etc., had their birth at a time of general, social, political and ecclesiastical, as well as pathological and therapeutical lawlessness. And, now that medicine is completely reorganized, homœopathy and all other fancy systems are carried about on the body medical "like an old wen," and it may be said of their authors, as is said in Owen Glendower's story: "The earth shook at your nativity, did it? Very likely, and so it would have done at the same season, if your mother's cat had kitteded, though yourself had ne'er been born."—JAMES L. TUCKER, M. D., 50 Douglas Place, Chicago, in *Chicago Medical Gazette*.

It is doubtful if the most profitable practice in the United States averages \$60,000 yearly, say for five or ten years. We do not know of a practice in Philadelphia which averages quite up to \$40,000 a year, though several closely approach it.—*Med. and Surg. Reporter*.

## WAS WASHINGTON THE VICTIM OF MALPRACTICE?

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Dr. Toner remarked that before taking his seat he would say one word upon the disease of which General Washington died and the medical treatment he received. This subject has frequently been discussed, and recently revived by one of our papers. The physicians, Drs. James Craik, Elisha Dick and Gustavus Brown, who attended General Washington, appreciating the propriety of giving some account of the character of his illness and death, published over their own signatures a circumstantial account of it in the first issue of the *Alexandria Times* after the melancholy event. Colonel Lear, the General's private Secretary, within twenty-four hours after his decease wrote out an account of the disease. By reviewers and writers on this subject there has been much cheap criticism and sentimental declaration. But few have taken the trouble to ascertain all the facts, or, having the facts, have not had the medical knowledge to give them their due weight. To Edward Everett we are indebted for having had a thorough and comprehensive study of "The Last Sickness of General Washington and its Treatment by the Attending Physicians" made by Dr. James Jackson, of Boston, confessedly at the head of his profession in America, and from whom we derive the following facts:—The disease was acute laryngitis, and the severity of the attack allowed but brief time for medical treatment. It is a rare disease, and in its violent form almost uncontrollable; inflammation of the larynx, (the upper part of the windpipe.) The disease at the time of Washington's death had not been so clearly described as to distinguish it from all other diseases of the throat. It was about 1810 that Dr. Matthew Baillie, of London, one of the first physicians of that metropolis, published an account of two cases seen by himself, both in medical men, one of whom was his personal friend. They proved fatal. A third case was reported to him. Of each of these careful post mortem studies had been made. It was ascertained in these examinations, as it has frequently been since, that the disease consists of an inflammation of the mucous membrane, and subjacent tissue and soft parts of the whole larynx, including the epiglottis. From the altered form of the glottis, by the swelling, swallowing becomes difficult or impossible, and the lessened capacity of the larynx or

windpipe by the swelling which takes place on the inside, the passage of air to the lungs is effectually excluded, and death ensues from suffocation. In the rapid course such cases run, debility plays but a small part. Suffocation ensues from the swelling and inflammation of the inner walls of the larynx, and as effectually destroys life as would strangulation from pressure by a cord or other force applied from without. Thus the sudden destruction of life is readily understood. The disease it is allowed, was one of acute inflammation, and after eighty years of progress in the science of medicine this disease, while better understood, is still a formidable one, and in its severe forms generally fatal. Dr. Baillie recognizing the inflammatory and dangerous character of the disease, bled his patients both generally and locally, and applied blisters and other remedies similar to those used by Dr. Craik. This occurred at a period comparatively near that of the death of General Washington to contrast their treatment. What do the best teachers and practitioners of the present day direct in such cases ? Keeping the case in point before us, we do not hesitate to say in a general way, that in violent cases they would recommend bleeding and blistering. A surgical operation that would have opened the larynx might possibly have given some relief and prolonged if it had not preserved his life. It is not deemed desirable to go farther into the subject, and we confess from the knowledge we have of the character and professional abilities of Dr. Craik, that he not only fully comprehended the character and gravity of the disease of which his illustrious friend died, but that he treated it with judgment, and that he and his friends did as well under the circumstances as would have any of his critics.—*Washington Paper*.

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### THE PAMPHLET BOX.

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Many letters of enquiry have come to us about the address of Mr. T. L. Clacher, the manufacturer of the pamphlet-case figured in our March number. We supply our inadvertent omission now, T. L. Clacher, 107 East 28th Street, New York.



# INTRA-UTERINE MEDICATION BY IODIZED PHENOL.\*

By ROBERT BATTEY, M. D.

Fellow of the American Gynæcological Society, etc.

Eight years ago I was impressed with the opinion that the results obtained from intra-uterine medication by argentic nitrate and other escharotic remedies, as was then the custom in America, were very unsatisfactory. In my own practice it was a common observation, that scanty menstruation of a permanent and intractable character followed upon the treatment, due apparently to a cicatricial condition of the endometrium left behind. In not a few cases, stenosis of the os had to be remedied, and in some instances recurred time and again. In a few cases, entire occlusion of the os occurred, and retained menses had to be evacuated.

In casting about for eligible substitutes, the iodine tincture and carbolic acid presented themselves, and were successively tried, both separately and in combination, but the results thus obtained were meagre and unsatisfactory. Theoretically, iodine appeared to offer decided advantages, not only as a local stimulant to the uterus, but in consequence of its ready absorption, as a local and general alterative also, but the officinal tincture proved too feeble in power to secure satisfactory results, and the stronger preparation of Dr. Churchill, of Dublin, was to me then unknown.

The thought of employing carbolic acid as a solvent for iodine suggested itself, and experiment developed a knowledge of the remarkable solubility of the latter in the liquefied acid. At first, one drachm, then two, three, and four drachms of iodine, was found to be soluble in an ounce of the acid. The last, and strongest, solution proved to be decidedly escharotic in its action upon the tissues, and especially upon heterologous growths of low vitality, and has been much used by the writer for attacking uterine cancer, and more particularly to supplement the curette. The standard solution employed in intra-uterine medication consists of one part by weight of iodine dissolved in four parts of liquefied carbolic acid, and to this solution I have given the name iodized phenol.

Iodized phenol is believed to be simply a concentrated solution of

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\*Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cork, August, 1879.

iodine in carbolic acid, and not in a proper sense a chemical compound. It is black in color, syrupy in consistency, and possesses in marked degree the pungent odor of iodine, which is rapidly given off when it is heated.

Since its introduction into my practice, the iodized phenol for intra-uterine medication has been employed by me to the almost entire exclusion of other remedies. In February, 1877, it was brought to the notice of the profession in America through the columns of the *American Practitioner*, and is to-day very much employed, but more especially in the Southern States. The recital of cases to illustrate its uses would be inconsistent with the brevity which should characterize the present writing, and hence it is proposed to present in general terms only the method of its application and the results obtained from its use.

At first, it was employed in a state of more or less dilution with glycerine; but, more recently, it has been used only in its full strength, being the energy of the application, regulated by the quantity employed and the extent to which it is carried into the uterine cavity.

The instrument employed in making the application may be one of the many forms of applicators, so-called, or any uterine probe or sound which will easily enter the canal. It is my habit, and I specially prefer, to use a rather slender and elastic hard India-rubber probe, made slightly tapering, and with a blunt, not bulbous, point. The elasticity of this probe allows it to yield rapidly to pressure, to change its course, to follow easily the canal of the cervix, and to enter the uterine cavity proper, and this in spite even of a moderate flexion or version of the uterus. From the cotton-factory is obtained cotton-wool in the form of an untwisted rope or roll, the fibres of the cotton being perfectly straight, and lying parallel with each other. It is technically known to the cotton-spinners, as the "lap," and can be purchased of the best quality at our factories, for eightpence to tenpence sterling per pound. It is admirably suited for general gynæcological uses.

*Mode of Application.*—Having selected six or eight of the elastic probes, I break off from the cotton "lap" four or five inches, and with my fingers separate or split it into several fasciculi of such size as, when wound upon the probes, will enlarge them to the thickness

desired. The end of the probe is now moistened slightly, and the fasciculus of cotton wound spirally upon it. The cotton-arm probe is now dipped into the iodized phenol, any redundancy is allowed to drip away, and the probe is passed into the uterus with a slow spiral movement as it advances. At first, the probe is introduced but a short distance, and immediately withdrawn, and the case rests here to test the tolerance of the uterus for the remedy. At subsequent stages, the probe may be carried to the fundus, and followed immediately by a second, and even by a third or fourth, if well borne. The remainder of the wrapped probes are employed for wiping off the cervix or vaginal wall any of the phenol that may have touched these tissues. The energy of the application is regulated by the size of wrapping, the depth to which the probe is passed, and the number of medicated probes used. When a very decided impression is to be made, a backward turn is given to the probe in its withdrawal, so as to leave the saturated cotton in the uterus, there to remain twenty-four hours, or even until it is spontaneously expelled. The application is renewed every four to fourteen days, according to the energy of the treatment.

I have abandoned the use of sponge-tents in connection with the treatment set forth. When dilatation is required, the cotton-wrapped probe is employed, and the cotton left as a soft tent in the canal. The dilating power of this is notably less than of sponge, but nearly equal to sea-tangle, and, it is believed, entirely safe. The results are the following :

1. A perfect removal of all cervical mucus, which is promptly coagulated, and comes away closely adhering to the cotton. The probes subsequently passed bring the remedy directly in contact with the diseased membrane.

2. Always comparative, and usually entire, freedom from pain. This is a marked feature of the method, and in striking contrast with former experience. Carbolic acid is a local anæsthetic, and so numbs sensibility as to make the energetic application of iodine for the most part entirely devoid of pain.

3. The iodine is so rapidly absorbed by the uterus, that the patient remarks its metallic taste in the mouth and throat, ordinarily in five or ten minutes after the application.

4. Softening and more or less dilatation of the cervix and os.

5. There is temporary arrest of leucorrhœa, followed by
6. Watery discharge, sometimes bloody.
7. There is exfoliation of the superficial layer of the mucous membrane, which comes away in shreds, sometimes entire, and resembles glove-kid.
8. Abrasions of the os promptly heal.
9. Indurations of the uterus disappear.
10. Leucorrhœa is permanently arrested.
11. Villosities of the endometrium are removed without resort to the curette.
12. Subinvolution of the uterus disappears.
13. The menses become regular and healthy; menorrhagia and scanty menstruation, as well as dysmenorrhœa, are remedied.
14. The appetite and digestion improve, and this, in many instances, without the use of medicines.
15. So thoroughly is the system impregnated with iodine, that alteratives by the stomach are not used.
16. The form of the cervix and os is often completely changed; a large puffy cervix, with patulous slit-like os, becomes even virginal in type after long use of the remedy.
17. Stenosis has not followed the treatment in any case noted.
18. Barrenness of nine to fourteen years' duration has been removed in several instances.

*Remarks.*—Rapid, and at the same time satisfactory, cure of chronic uterine ailments, such as are contemplated in this paper, is not attainable by any method of treatment known to me. It is not proposed that rapid cures can be made by the means herein set forth; on the contrary, the long standing and obstinate cases, such as usually fall into my hands, require many months for satisfactory cure.—*British Medical Journal.*

*Apomorphia in Hysteria.*—Dr. Allan, of New Wandsworth, England, relieved a case of hysteria by injecting subcutaneously one-tenth grain of apomorphia; succeeding after other means had failed.

## COUNTRY DOCTORS.

A long period of time has elapsed since any medical man was known to quote a line from the Eclogues or Georgics of Virgil. In fact, it would seem to be a precept of the *materia medica* that pastoral themes and professional thrift are incompatibles; and apparently the Aesculapius of to-day dares not even think of the gentle Tityrus, least he should himself become, too, *patulæ recubans sub tegmine fagi*. But what if he did? It is the agrophobia, and not the spreading beech which is baneful to an enthusiastic man. The youthful graduate packs his trunk on the morning after commencement day, and betakes himself reluctantly to the railway-station. He is envious of such of his class-mates as can afford to settle in the metropolis and await the tide of professional fortune. For them, the fates have decreed an opportunity to keep up their studies and build up their reputations; for him, there is no future excepting the rust and dust, the abundant toil and scanty remuneration, the obscurity and desuetude of a country practice. He cannot remain in the city to starve, therefore he must go to the country; but he believes in so doing he goes into a sterile exile, a Siberia where no good fortune is possible—except, perchance, to make one's escape.

This view of the matter is as mischievous as it is fallacious. It must necessarily work injury to the individual practitioner, to his patients, and to the profession at large. Of course a man who does not expect to study is not likely to study. If the mental pabulum which he can extract from the old wives' lore of the village in which he functionates is all that he demands for him, it is doubtless all that he will get. But the old wives are not to blame for this. The fault is in the man himself; or in the purpose and expectation with which he enters upon the career that falls to his lot. True, the metropolis affords advantages and opportunities which the village does not furnish; it also imposes hindrances and limitation which are not encountered in the village. The converse is also true. And to the student who has learned the knack of withdrawing into his sanctum, it is comparatively unimportant whether he be surrounded by the bustle of the town or the gossip of the country. The town is critical; the country is fecund; that is all.

The country doctor complains that he is deprived of the stimulus



of fellowship ; but he is mistaken. The post office will keep him closely *en rapport* with his peers, whatever the intellectual rank to which he may attain. Whittier at Amesbury lives in a community of poets ; with Tennyson at breakfast, Longfellow at dinner, and Holmes lending the sparkle of champagne to his tea-table. So will the country doctor enjoy the real fellowship that he earns. He complains that he is sent off from a tending upon the great clinics of the metropolis. Yes, but every case that comes before him is a clinic, if he will but turn it to account. He has but to keep up the scientific habit and purpose of life, and all that he does will have the character and productiveness of scientific work.

The wide domain of experimental science is probably as accessible to the country doctor as to his urban confrère. A laboratory can be established anywhere, and it is from the laboratory that modern science expects to obtain her most important data. Edison's laboratory stands in a metropolis of Jersey mud ; Virchow built his reputation in a remote townlet ; Mayer, of whom Tyndall says, "as seer and generalizer, Mayer, in my opinion stands first," was all his life a country doctor ; and no man who can obtain control of a garret or a shanty should permit himself to complain that he lacks a  $\pi\omega\beta$   $\sigma\tau\omega$  from which to move the universe.

Moreover, aids and guides to private study are vastly more abundant and accessible than in the days of Mayer, or the youth of Virchow. To the students of anatomy, the books of Gray and Huxley, a scalpel and the cadaver of an animal, will furnish material for any amount of research. For histology, Rutherford's little book and a microscope will open the way to a life-long career. For experimental therapeutics, what could be more favorable than Ott's monograph, and the plenitude of organic life which is to be found only in the country ? If the country doctor would be a chemist, let him start his laboratory, and Morfit's "Manipulations" will tell him all that he lacks ; if botany is his choice a microscope and Sach's book will give him an excellent start ; or if he cares to join the great army of physiologists, he will find all that he needs in Sanderson's handbook for the physiological laboratory.

But the country doctor complains that he has no time. True enough, perhaps ; neither has the city doctor. Only the great workers have time for work.

Some fifty miles from New York city there lives a country doctor whose gig has rattled over the stones and plowed through the mud of the vicinage for more than a quarter of a century. He still toils day and night at the vocation in which he has grown gray—he will never grow old. He started poor; probably he is not yet rich in worldly pelf. Yet the success of his life is such as would satisfy the reasonable ambition of any man. The visitor knocking at his door will be welcomed by a broad-shouldered, genial scholar, who takes his heart when he gives him his hand, and opens wide to him the portals of a mansion where simplicity vies with elegance, and all domestic graces flourish in a Christian household. To have developed such a home were success enough for any man. But yonder is another and larger building. It is the fire-proof library and laboratory, where this man proves to the world, after a fashion of his own, that a country doctor has no time for scientific pursuits, no stimulus, no fellowship. Here are thousands of rare and priceless volumes, collected, arranged, and mastered by this country doctor. How could he have found the time for all this? But this is not all. Up stairs, in a spacious hall, cabinet after cabinet is filled with collections of shells, of skeletons, of pathological specimens,—thousands and thousands of objects of scientific interest, grouped, studied, and remembered by this country doctor. But this is only the by-play of his life. Year after year, he sits at his desk in the half hours which he can save out of the day's turmoil, and, looking out upon the noblest of rivers and the fairest of scenery, he thinks out of the great work of his career. Every year adds a few pages to the book, and each decade shows that he may hope yet to see his masterpiece completed.—*Annals of the Anatomical and Surgical Society.*

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*Borated Vaseline (or Cosmoline).*—By triturating borate of soda with glycerine before adding to vaseline (or cosmoline, a fine preparation for vaginal examinations will result, instead of the gritty, "salted butter" preparations which is sometimes obtained from the pharmacist.—Dr. CRONIN, in *St Louis Courier.*

## PHOTOGRAPHS OF MEDICINAL PLANTS.

Mr. C. L. Lochman, of Bethlehem, Penn., has sent us some photographs of medicinal plants, taken from the growing plants. They are exceedingly well done,—the specimens are well selected, and the exhibition of the plant organs are carefully arranged. We are having large additions to pictorial botany from several sources just now, but no publications are half so valuable for teaching purposes as these. While it would be impossible for the artist, however skilled, to give in minute detail the texture of leaf, flower, fruit and root, the photograph succeeds in giving all these details, and they will stand the searching scrutiny of the magnifying glass. We only wonder why a similar work has never before been attempted. Mr. Lochman has 54 photographs now completed, for which he charges the small sum of \$6.75.

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*Injurious Effects from Vulcanite Plates.*—Samuel Sexton, M. D., in an article published in the *Amer. Jour. of the Med. Sciences*, for January, 1880, states that vulcanite plates produce diseases that are more frequently the source of reflex aural disease than any others worn. They have been in use for over twenty years, and their adoption is very general. The constituents of this are caoutchouc, the sulphur required in the vulcanizing process, and vermilion or the sulphide of mercury, used for the color it imparts. The quantity of the latter ingredient is believed to be equal in weight to both the other substances mentioned; accurate knowledge, however, is withheld by the manufacturers. The gradual disintegration of these plates, as they are worn in the mouth, liberates a salt of mercury whose poisonous effects are well known. But besides yielding a poison, they are otherwise injurious to health. Inquiries from dentists elicit the fact that at least one-third of all those who attempt to wear them experience great irritation of the mouth, an irritation that is frequently accompanied by hyper-secretion of the buccal fluid. The sufferer usually lays aside the plate until informed of the necessity of becoming accustomed to its presence by uninterrupted use. Vulcanite is a non-conductor of heat, and the effect of its contact with the highly sensitive tissues of the mouth is to produce hyperæmia and inflammation. Another source of injury is the very close contact of these plates, which is maintained by atmospheric pressure, and may favor the absorption of their substance.—*Med. and Surg. Reporter.*

## NEW MEDICINAL AGENTS.

*The Bromide of Ethyl.*—This new anæsthetic has for some time occupied an extraordinary space in the American medical journals. This is due to the eminence of the gentlemen who introduced it—Drs. Levis and Turnbull, of Philadelphia—and to the enterprise and high-standing of its Philadelphia manufacturers, Messrs. Wyeth & Bros., to whom I am indebted for specimens used.

Having occasion a short time since to take an anæsthetic during a dental operation; I chose the bromide of ethyl, because it is the latest and one in which I had not had personal experience. Having Dr. Geo. W. Ryan present in case of accident, Dr. Noel, an accomplished dentist, being ready with his instruments, I proceeded to take the anæsthetic.

Unwisely I determined to note its effects compared with those of nitrous oxide gas, chloroform and sulphuric ether, all of which I have frequently taken. In consequence my mind remained very active. I went into the anæsthetic state slowly, and the talking in the house and the noises in the street originated many delusions. At one time I fancied myself speaking upon a life-and-death matter through the telephone with Dr. Coleman Rogers; then Dr. Cowling, I imagined, was discussing with me important matters of the *Louisville Medical News*; then Dr. David Yandell seemed present, and I thought was inclined to do some surgery upon me. At last I lost consciousness, and Dr. Noel removed two molars. The first I was aware was being extracted, but felt no pain; the second, being inflamed about the roots, gave pain. I returned quickly to perfect consciousness. I was confined to my bed at the time by sickness, and had taken a quantity of opium for severe neuralgia, and had considerable nausea and vomiting after the operation, but much less than I have had after chloroform or ether, and none of the headache that I always experienced after these. The vomiting was quite as chargeable to the opium as to the anæsthetic. Dr. Noel has kindly furnished the appended reports, which will be read with interest.

In the *Medical Record* of April 3d, Dr. Marion Sims reports a case of death attributable, he thinks, to the bromide of ethyl. He gave it for an hour and a half while performing Battey's operation on a young woman in very bad condition. She died twenty-one

hours after the spaying, and nephritic disease was discovered in the post mortem examination. Dr. Sims thus concludes his article:

“ The inference that I draw from the facts in the history of this case is that the anæsthetic was the cause of death, while the manner of death may have been by uræmic poisoning. The lesson from this is, never to give bromide of ethyl in prolonged operations, and never to give it where there is organic disease of the kidneys. What then, shall we give ? ”

Drs. Lewis and Turnbull have not anæsthetized their patients for longer than forty minutes. Whether the bromide of ethyl is better than chloroform or ether for prolonged operations is an undetermined question. All anæsthetics are dangerous, but for brief operations I believe it is likely to become popular. In odor it is infinitely less disagreeable than ether, much less so than chloroform, and produces anæsthesia more rapidly than either of these though less rapidly than the nitrous oxide.—LUNSFORD P. YANDELL, M. D., Professor of Clinical Medicine and Diseases of Children, and Dermatology, University of Louisville.

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My attention was called a few weeks since to this agent as especially adapted to dental operations, by Professor L. P. Yandell, who was himself the first patient for whom I extracted a tooth under its influence. Subsequently I have used it in three other cases, of which I append a brief account :

Case I—Mr. B., aged 40, of light build and anemic habit, called accompanied by his surgeon to have two aching teeth extracted. The agent was inhaled from a sponge pressed lightly into the apex of a cone of sized paper. Only a few inhalations were required and the teeth were removed without pain.

Case II—As soon as the chair was vacated by this patient, a boy, aged 15, of plethoric habit, who with swollen face was waiting to have a sixth-year molar removed, was in like manner anæsthetized and relieved of his tooth.

Case III—My third case was a little Hebrew boy, aged 14, who had been so unfortunate as to have the crown of an aching sixth-year molar broken off in an attempt at extraction, leaving the pulp exposed and highly inflamed. It was one of those painful cases imperatively demanding an anæsthetic. The boy was quickly



brought under the drug ; the gum was laid away from the alveolus in two flaps, external and internal ; the beak of an alveolar forcep carried well down upon the process ; and ripping through, the roots were removed.

The most notable feature in these operations was the quickness with which these patients succumbed to the drug, the speed with which they rallied, and the entire freedom from headache and nausea in every case.—L. G. NOEL, M. D., D. D. S., in *Louisville Medical News*.

## REPORT ON THE REVISION OF THE PHARMACOPŒIA.

We have read this pamphlet and have risen from its perusal with the impression that the amendments and changes proposed, if adopted will put the art of pharmacy far in advance of that previously enjoyed in this country.

We are more than ever satisfied that pharmacy has outgrown its old dimensions so greatly, that it is useless to expect the practitioner to master it. In the future we must depend for the revision of our pharmacopœia on the educated pharmacist, to whose scientific attainments may be added a doctor from that increasingly rare class of physician-pharmacists. We are willing to follow the lead which has been taken by Professor Rice, confessing at the same time our inability to analyze his report with any satisfaction to ourselves or our readers.

*A Simple Method of Evacuating Small Calculi.*—Dr. Mercier recently demonstrated before the Société de Médecine an easy and practical means of getting rid of small vesical calculi. It consists in making the patient lie on his belly ; then the calculi fall by their own weight into the anterior part of the bladder. The patient is then allowed to rise slowly on all-fours. He micturates in this position, and the calculi, which have not yet had time to return into the *cul-de-sac* behind the prostate, are carried away in the stream of urine.—*Med. Press and Circular*.

## THE MEDICAL SOCIETY OF NORTH CAROLINA.

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The 27th annual meeting of this Society will take place in Wilmington on Tuesday, the 11th day of May.

The North Carolina Board of Health, and the Board of Medical Examiners, both auxiliary bodies of the State Society, meet at the same time and in conjunction with it. The Medical Examiners are expected to be present by Saturday, the 8th, or Monday, the 10th of May, to prepare for the large number of candidates for license expected to present themselves, thereby giving new licentiates an opportunity to take part in the meetings.

The annual essay will be presented by Dr. THOMAS J. MOORE, of Charlotte, on the subject of "Pelvic Cellulitis."

EUGENE GRISSOM, M. D., LL. D., is the orator for this meeting.

J. F. SHAFFNER, A. M., M. D., of Salem, President.

L. J. PICÖT, M. D., of Littleton, N. C., Secretary.

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## BOARD OF MEDICAL EXAMINERS OF NORTH CAROLINA.

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*Editors North Carolina Medical Journal :*

The undersigned, a committee appointed for the purpose by the Medical Society of North Carolina, respectfully ask you to publish the following notice for the information of your subscribers :

The Board of Medical Examiners of the State of North Carolina will meet in the city of Wilmington, Monday, May 10th, 1880, for the examination of applicants for license.

Without a license from this Board, "no person shall practice medicine or surgery or any of the branches thereof, or in any case prescribe for the cure of disease, for fee or reward."

Furthermore, he "shall not be entitled to sue for or recover, before any magistrate or court in this State, any medical bill for services rendered in the practice of medicine or surgery, or any of the branches thereof."—Laws of North Carolina, 1858-59.

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|------------------------|--------|
| PETER E. HINES, M. D., | } Com. |
| W. T. ENNETT, M. D.,   |        |
| H. T. BAUNSON, M. D.,  |        |

## OBITUARY.

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H. H. TOLAND, M. D.

Dr. H. H. Toland, a prominent physician of San Francisco, died on Friday, February 27th, of apoplexy. He was a South Carolinian by birth, and carried with him to the new State of California the stubborn stuff of which pioneers should be made.

W. A. BIZZELL, M. D.

Dr. W. A. Bizzell, of Elizabethtown, N. C., died on the 15th of January, aged 53 years. He was born in Johnston County 1827. Attended Lectures in the University of Pennsylvania. He was a physician of excellent local professional reputation, serving the same community for a quarter of a century.

B. RUSH SENSENEY, M. D.

Dr. B. Rush Senseney, of Chambersburg, Pa., died at his house in that town, March 28th, from the results of a disease of the femur and its articulation, from which he had long been suffering. He had for a number of years conducted the principal vaccine farm in this State, and his writings on vaccine subjects and small-pox had made his name widely and favorably known to practitioners. Personally, he was a gentleman of agreeable manners and estimable character, and his loss will be regretted among a wide circle of acquaintances.—*Med. and Surg. Reporter*.

SAMUEL LANGDON, M. D.

Dr. Samuel Langdon died at the residence of his brother, Dr. Walter R. Langdon, at one o'clock this morning. His death was not unexpected. During the last two years he entertained no expectation of living more than a few months, and he seemed to await the event of death with perfect equanimity. He was a native of Wilmington, North Carolina. He came to California and to Stockton in 1849, and since that time he has been a resident of this city, known and respected by all, and meriting the esteem and confidence extended to him. As a physician, he responded as cheerfully and promptly to the calls of the suffering poor as to the summons of the rich. He was to the poor and unfortunate both physician and friend. By them his death will be mourned with unfeigned sorrow. *Stockton Daily Herald*.

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## BOOKS AND PAMPHLETS RECEIVED.

A Protest Against Meddlesome Midwifery. By H. Gibbons, Sr., M. D. Pp. 11.

The Problems of Insanity. By George M. Beard, A. M., M. D. Reprint. Pp. 24.

On the Relations of the Placenta to Postpartum Hæmorrhage. By Walter Coles, M. D. Reprint. Pp. 8.

On Some of the Uses of Antiseptics in Obstetrics and Gynæcology. By T. H. Ashby, M. D. Reprint. Pp. 13.

New Method of Permanently Removing Superfluous Hairs. By L. Duncan Bulkley, A. M., M. D. Reprint. Pp. 7.

Bulletin of the North Carolina Board of Health. February and March. 1880. Compiled by Thomas F. Wood, M. D. Secretary.

Cinchonia Alkaloid and Mixture. Its use in North Carolina, South Carolina and Florida. Pamphlet from Messrs. Powers & Weightman.

Reflections upon the History and Progress of the Surgical Treatment of Wounds and Inflammations. By Edward Borek, M. D. St. Louis, Mo. Reprint.

Our Homes. By Henry Hartshorne, A. M., M. D. Philadelphia: Presly Blakiston, 1012 Walnut St., Philadelphia, Pa. American Health Primer Series. Price 50 cents.

Malignant Degeneration of a Fibroid Tumor of the Uterus. Large False Aneurism in the Substance of the Growth. Drs. Albert N. Blodgett and Clifton E. Wing. Boston: Reprint.

Notes on the Anatomical Relations of Uterine Structures. With Surgical Remarks and Therapeutical Suggestions. By T. H. Buckler, M. D. Baltimore, Md. Reprint. Cambridge: Riverside Press. Pp. 34.

A History of the Origin and Growth of the Jefferson quiz Association. Together with a Condensed Account of Six Years Experience in Medical Teaching. By John V. Shoemaker, A. M., M. D. Pp. 25.

On the Nomenclature and Classification of Diseases of the Skin; with remarks upon that recently adopted by the American Dermatological Association. By L. Duncan Buckley, A. M., M. D. Reprint. Pp. 15.

Report of the Superintendent of the North Carolina Insane Asylum, to the Governor and Board of Directors, for the year ending Dec. 31st, 1879. Raleigh: P. M. Hale, Edwards, Broughton & Co. 1880.

We welcome to our exchange list "The American Journal of Pharmacy" an old time friend, and we are glad to see that it still maintain its vigor. This Journal has been the leader of American pharmaceutival teaching for many years, and has given an educational foundation to scores of the present generation of pharmacists.

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M. J. DeROSSET, M. D.,  
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## ORIGINAL COMMUNICATIONS.

### LITHOTRITY AND EVACUATION OF THE FRAGMENTS AT ONE SITTING WITHOUT ANÆSTHETICS AND WITHOUT THE WASHING BOTTLE.

By CHARLES DUFFY, JR., M. D., Newbern, N. C.

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Probably no new departure in surgery, for a long time, has received so little adverse criticism or such universal commendation as Bigelow's Litholapaxy.

It is not my purpose, however, to discuss the merits of the operation: this has been well done by Bigelow,\* by Van Buren,† Cadge,‡ Thompson,§ Gouley,|| Weir,¶ Little,\*\* Keyes††, and others. Keyes in his "Description of the Cases" tells the story of its

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\*American Journal Medical Sciences, January, 1878.

†Medical Record, September 28th, 1878 and March 23d, 1879.

‡Lancet, April 5th, 1879.

§Lancet, August 2d, 1879, and January 10th and 17th, 1880.

¶Medical Record, October 18th, 1879.

\*\*American Journal Medical Sciences, January, 1880.

††Annals Anatomical and Surgical Society, Brooklyn.

‡‡American Journal Medical Sciences, April, 1880.



progress as a surgical procedure in unmistakable language when he says : "They [these operations] include every case of stone in the male which has come to Dr. Van Buren and myself, in the past two years. No case which offered has been refused operation."\*

This prospect so fair to the specialist in bladder disease, is marred by the warning that comes from almost every one of the authorities named, viz : none but surgeons skilled in the use of the lithotrite should attempt the operation on the living subject. In this, I have been a transgressor, but my transgression seems to furnish additional evidence in support of the principal enunciated by Bigelow : "That the bladder tolerates prolonged manipulation kindly if left empty afterwards." This I conceive to be the chief merit of the case I am about to report.

The operation differs from Bigelow's procedure : 1st, in having been done without the administration of an anæsthetic ; 2d, in the manner of evacuating the detritus.

It differs from the old operation in (1st) length of time the lithotrite was kept in the bladder, and (2d) the object to leave the bladder free of fragments.

I did not use anæsthetics because I preferred to leave my patient free to complain of any violence I might do his bladder with the lithotrite, and I did not use a washing bottle because I did not have one.

Case —, J. W. F. W., a young man of good habits and constitution, aged 23 years, presented himself January 18th, 1879, with symptoms of vesical calculus. Examination with Thompson's searcher discovered a small stone impacted in prostatic urethra. A No. 18 iron wire doubled so as to form a loop at its extremity and shaped somewhat after the manner of a sound, was carried down and slipped over the stone which was readily withdrawn as far as the fossa navicularis. To dislodge it from this point it was necessary to incise the meatus which was done freely and the stone removed. Patient was put to bed and 10 grains quinine and  $\frac{1}{4}$  grain of morphia administered.

No further difficulty was experienced until the 22d when he complained again of vesical irritation. On examination, a stone, impacted exactly as the first, was discovered, and very readily caught

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\*Loc. cit., page 378.

in the wire loop used on the previous occasion. This time the stone proved too large to pass the urethra and it was with difficulty the loop could be disengaged from it and the stone pushed back into the bladder. Having subjected the patient to considerable manipulation. I felt unwilling to prolong the sitting, so gave him quinine and morphine and put off further interference until the 24th when stone began to trouble again, having once more become impacted in prostatic urethra.

I now pushed it back into the bladder, and after a number of efforts with Fergusson's lithotrite, caught and crushed it. On the 25th, the young man brought me the fragments of stone, which he had passed soon after the crushing, and expressed himself entirely free from trouble or distress.

It will be perceived that up to this time I had not explored the bladder, for the reason that at each sitting a stone was found engaged in the prostatic urethra which it would seem was sufficient to account for all the unpleasant symptoms; and when the lithotrite was introduced into the bladder on the 24th, no other than the small stone lately impacted was suspected; and so the blades of the instrument were not sufficiently opened to grasp and appreciate the stone which necessitated the operation it is the purpose of this report to describe. It was not, therefore, until the 31st, when a searcher was introduced, that it was detected.

The patient, preparatory to the operation, was directed to keep his room and take a dose (x gr.) of quinine daily, he was also directed to take a dose (ʒ ij.) of fl. ext. hydraugea three times daily.

On the 2d of February the bowels having been moved and the urine retained for three hours, the lithotrite was introduced and the stone caught and crushed.

The work of comminuting the fragments occupied nineteen minutes, during which time the lithotrite was kept continuously in the bladder. The instrument withdrawn, the urine was passed and a quantity of fragments discharged. Nélaton's catheter was now introduced and about five oz. of warm water, into which a little borax had been stirred, injected into the bladder and the catheter withdrawn. The injection was passed voluntarily, bringing away many fragments.

The injection was repeated and passed as before, bringing away this time, very little detritus.

Patient was put to bed and a dose of quinine and morphia given him. In his morning evacuation of urine there was no calculous matter nor has there been since. No blood was passed; there was no strangury or other difficulty with the urine. Patient left his room on the day after the operation and has not experienced the slightest vesical discomfort since. Size of stone in its greatest seizure twenty-four mm. or 15-16th of an inch. Collected detritus when dried weighed eighty-two grains. The stone was very hard, composed of uric acid and urates.

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### RACHITIS—ASTHMA FOLLOWING WHOOPING COUGH— ASTHMA FROM FATTY DEGENERATION OF THE HEART.

A Clinical Lecture Delivered at the Hospital of the University of  
Pennsylvania, November 22d, 1879.

By WILLIAM PEPPER, M. D.

Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WM. H. MORRISON, M. D., for the NORTH CARO-  
LINA MEDICAL JOURNAL.

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### RICKETS WITH BRONCHIAL IRRITATION.

GENTLEMEN:—I wish first to ask your attention to this child, who, its mother says, has suffered considerable from shortness of breathing, especially at night. It is fifteen months old, does not nurse, ceased nursing at fourteen months. He has had the catching spells in breathing since he was two months old. They may last for an hour but are not continuous. The child does not grow purple in the face. The mother says that she has one other child which is healthy.

The child has shortness of breathing but not a distinct stoppage. I have questioned the mother in regard to the character of these spells in order to determine whether or not they are due to laryngismus stridulus. It is very clear from the description she has given that there is no laryngismus stridulus.

In laryngismus stridulus the attacks occur once or twice in the

twenty-four hours, or sometimes more frequently. They are apt to come on during the day, and the child while playing may be seized with an attack, the muscles of the face become rigid, the breathing is suspended and the face become livid; the attack passes over, the child takes a long inspiration and breaks out crying. If the attacks are mild, there is not much danger, but I have seen sudden attacks cause asphyxia. The spells in this case are more like those of asthma—not a spasmodic stoppage but simply labored breathing.

Whenever I find symptoms of impaired respiration, I always look for signs of rickets, as it is quite common to have respiratory symptoms due to this disease. In this case the head at once attracts our attention. It is large for a child of this age. The occipital bone appears particularly prominent and feels swollen as though there was a thickening over it. This enlargement is not symmetrical. The skull has not the large, square character of true rickets, in which we find not only the occipital, but also the parietal and frontal prominences well-marked. This gives to the skull an awkward square look very different from the round globular form of hydrocephalus. As I pass my finger along the sagittal and coronal sutures, I notice that there is apparently slight thickening along their margins, leaving a depression over the sutures.

The anterior fontanelle is still widely open. It extends not less than two inches in the longitudinal direction and an inch and a half in the transverse. The pulsation over it is well marked. On auscultation I have marked cephalic bruit, a distinct venous hum heard over the longitudinal sinus. This has been said to be characteristic of rickets, but this is not so and I simply mention its presence, to tell you that I do not attach much diagnostic value to it. There seems to be a little tenderness over the occiput.

On examining the chest, I find no beading of the ribs, that is, no thickening of the epiphysial cartilages between the ribs and the costal cartilages. The chest is pretty fully developed. The sternal region seems slightly prominent. There is no recession of the base of the chest when the child breathes. I make this observation in order to determine the presence or absence of obstruction to the respiration. In rickets, some of the most marked changes are those in connection with the chest. He constantly finds trouble with the bronchial mucous membrane, which is the seat of a catarrhal

inflammation, and in consequence of obstruction to the breathing from swelling of the bronchial mucous membrane. When the child breathes and the ribs are elevated, the lungs do not expand completely and so the pressure of the atmosphere causes the ribs to go in at their weakest part, which is at their junction with the costal cartilage and thus produces the deformity known as the chicken-breasted thorax. Wherever we have impairment in the expansion of the lung, atmospheric pressure will also cause recession of the base of the chest in inspiration. You will find this wherever there is any impediment to the entrance of air into the chest, particularly where the ribs are softened. There is, therefore, no evidence of rickets derived from the chest.

I can find no evidence of rickets in the bones of the arm, in the radius and ulna. The same is true of the tibia and fibula. The changes seem to be limited to the occiput and the ridges along the sutures, but it is very clear that these changes may be the result of a peculiar formation and not of rickets.

The mother further states that the child has sweats around the head at night, is restless and does not keep the covers on, and appears to be sore when moved.

Among the most characteristic symptoms of rickets are these excessive restlessness of the child at night so that it is impossible to keep him covered, secondly, a tendency to sweat, particularly about the head and neck, thirdly, indisposition to move much; tenderness on being handled.

On percussion I find the chest resonant over its posterior surface. Auscultation shows loud sonorous râles on inspiration. These râles have a loud snoring character. There is no cardiac lesion. These are then the only evidences of a chronic bronchial and tracheal catarrh.

We have excluded any obstructions in the chest by the absence of recession of its base in breathing and by the absence of the chicken-breasted deformity. Any obstruction in the larynx is excluded by the vigorous sounds made by the child. The child has but ten teeth so that there is retarded dentition, but I should caution you against attaching too much importance to this as a sign of rickets, for in some cases of rickets you may have the teeth developed normally, while in healthy children, the dentition may be much retarded.



We have here a case of rickets with bronchial catarrh which is a constant complication. It has involved certain bones of the skull, but has produced no other marked lesion of the osseous system, and we may be able to present their development.

The existence of rickets is, I think, proven by the marked tendency to sweat at night, the restlessness, the existence of tenderness on motion, tenderness over the occiput and the enlargement of occiput, and, lastly the condition of bronchial catarrh, and the tendency of the paroxysm to occur at night.

This child must be treated in the first place for the rickets. We will use inunctions of olive oil, internally we will use cod-liver oil in emulsion with the phosphite of lime. The diet must be nutritious, oat meal gruel with milk, and if the bowels become loose we will substitute barley or arrow-root. Meat broth will be given once a day. In the treatment of the catarrh with the tendency to spasmodic attacks at night, I think you will find the inunction of oil and the internal use of cod-liver oil very valuable. I will also give a little bromide and muriate of ammonia as in this formula.

R.

Ammonii bromidi, gr. lxxii.

Ammonii chloridi, gr. xxxvi.

Elixir calisayæ, f ̄j.

Aquæ, f ̄ij., soln.

Sig. A teaspoonful three times a day between meals.

He will also receive a teaspoonful of an emulsion containing 50 per cent. of cod-liver oil, after each meal, sponging twice a week with salt water.

#### SPASMODIC ASTHMA FOLLOWING WHOOPING-COUGH.

These two patients are suffering from asthma. In the boy it is asthma due to bronchial irritation. In the man it is due to degeneration of the heart.

The boy has suffered from it since he had whooping-cough, seven years ago. Emphysema is one of the worst sequelæ of this disease. By emphysema we mean a dilatation of the air vesicles. It is caused by the violent efforts to expel the air in coughing and occurs most frequently at the free borders of the lung. This dilatation causes permanent shortness of breath, due to the loss of

contractile power in the vesicles. In such subjects there is great liability to bronchitis. The power of resistance is lessened, and the mucous membranes thickened. The walls of the tubes become irritable, due to the constant irritation to which they are subjected, and finally, we have spasmodic asthma produced. This has been the history of this case. He is more subject to asthma in the spring and fall when he is more liable to take cold. He is always short of breath. He is now suffering from an increase in the bronchial trouble. His chest is full of sonorous and cooing râles. I can hear them with my ear six inches from the chest wall. The whole chest thrills with these râles. The breathing is labored. The expiration is prolonged, as he tries to force the air from the chest. The heart is normal. Here we have an ordinary case of bronchial asthma in a child following whooping cough.

There is no more distressing affection than this. The suffering during the paroxysm is intense. There is a state of spasm in the air tubes due to this excessive irritability. With this there is a constant state of exhaustion of the respiratory muscles. This brings about a state of suffering, that is, not within no other disease. The lips are livid, the arms and legs cold, the circulation sluggish, the skin beaded with sweat and the patient seems to be upon the point of dying; but just at this point the accumulation of carbonic oxide in the blood became so great, that it deadens the nervous system and the patient falls into a troubled sleep. The attacks are repeated the following night and from time to time until the acute bronchitis is relieved.

#### ASTHMA FROM FATTY DEGENERATION OF THE HEART.

We now turn to the other patient. He has been troubled with shortness of breath for three or four years. Had no palpitation of his heart before that time. Had rheumatism eight years ago. He has had difficult breathing for the last two years, he is very little worse at any time of the year. He has no cough. He has not been able to work for the last three years. The pulse is about 100 per minute, intermittent, irregular, small and weak. The heart sounds are excessively feeble. There is no valvular disease. We find respiration normally performed. The expiration is not prolonged, as in the boy's case. At the base of the lung, we have râles from congestion. In this case we have as a cause of the difficult breathing

failure of the heart's power. The walls of the heart have undergone fatty degeneration. The character of the heart's impulse and sounds, the weak intermittent pulse, are enough to prove this to be the case. Following this we have failure of the heart to force the blood through the lungs and thus there is produced a constant congestion at the base of the lungs. This keeps up a constant state of dyspnœa, and when any trifling excitement occurs, it brings on an attack of asthma.

In this case, the attack is not so clearly connected with bronchitis, as in the boy's case.

This is a perfect example of the asthmatic disease that accompanies heart disease.

Both these patients are now suffering from exacerbation of their trouble. The paroxysms are never as bad during the day, as they are at night.

I will try to bring these cases before you again in order to study the pathology of this disease.

## NEW FORMATIONS.

By EDWARD WIGGLESWORTH, M. D., Boston, Mass.

Dermatologist to Boston City Hospital. Clinical Instructor at Harvard Medical School.

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*Lupus Followed by Cancer.*—Professor Lang reports the case of a man, aged 57 years, who had suffered 47 years from lupus, who applied Nov., 1878, for treatment of a tumor of seven weeks' duration. Almost the entire face was affected by lupus, bluish-red, infiltrated, thickened, ulcerated and covered with crusts and luxuriant granulations. In part of the hypertrophied and deformed left ear was situated a semi-circular tumor two cm. in height and four cm. in breadth. The surface was uneven, reddish, necrosed and crusted. The tumor was soft, somewhat undefined in its periphery, not freely moveable, painless. Cancer upon a lupus base is specially to be dreaded. [Lang Lupus und Carcinom. Viertelj. f. Dermatol. u. Syphl. 1874: Kaposi Ueber Kombination von Lupus

und Carcinom. Ibid, 1879.] The tumor was at once gouged out and the base scraped with the dermal curette, covered with carbolic acid compress and brushed daily with tinct. arsenical Fowleri. On the 1st of February, 1879, only a firm cicatrice marked the spot. Iodide of iron and Fowler's solution were given for the lupus and in October, 1879, there being no return of the carcinoma the patient was discharged, his lupus having nearly disappeared. The cases of Hebra and of Volkmann were not kept under observation for any length of time and whether relapses followed cannot, therefore, be stated. Lang's case is, therefore, recorded as the longest under observation without relapse.—Reprint from Dr. Wittlehöfer's *Wiener Med. Wochenschrift*, No. 48, 1879.

*Rhinoscleroma*.—In the Royal Society of Physicians at Vienna, a woman aged 41 years, who had suffered for seven years from rhinoscleroma, was shown by Dr. Jarisch and the disease discussed\* by Billroth and Kaposi. The disease affected the whole cartilaginous portion of the nose and the whole extent of the upper lip. The soft palate had given place to mere cicatricial tissue. The posterior nasal aperture was the size of a quill. Stenosis of the larynx; vocal cords nearly immovable, grayish-red and granular.

Billroth had not yet made up his mind whether this chronic inflammatory process was due to syphilis. He had treated a case for six years, performing stomato-plasty every two years for the constantly recurring stenosis of the mouth. The extirpated mass shows no longer any small cell infiltration as at first, but consists of rigid, tough, scar-tissue. In this tissue, true bone formation has taken place though the periosteum of the jaw had not been affected before the disease nor by the operations. This spoke against the view that rhinoscleroma might be a sarcomatous formation.

Kaposi remarked that in his first work upon rhinoscleroma he had placed it, as a small cell infiltration, next to sarcoma, as was the truth histologically and clinically, rhinoscleroma spreading indefinitely and taking up all neighboring tissues into itself, without inflammation, hyperæmia, swelling, œdema, rise of temperature, or subsequent absorption. In one case he had seen large tumors formed, in another, absorption of upper jaw and even to the surface of the brain. The products of syphilis all tend to retrograde,

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\*Wien Med. Presse, Nov. 2, 1879, et. seq.

and yield to anti-syphilitic remedies locally applied. In rhinoscleroma the reverse is true. He had seen an exquisite rhinoscleroma of the soft palate while the nasal cartilages were unaffected.

*Port-Wine Mark and its Obliteration Without Scar.*—Squire furnishes in the fourth edition of No. III of his "Essay on the Treatment of Skin Diseases" an improved surgical treatment of vascular nevi, or angiomas. This improvement lies in a modification of the plan he originally adopted, viz: dividing the numerous enlarged blood-vessels by scratching through them with an ordinary cataract needle, first freezing the part with ether spray, and subsequently, before thawing, exercising continued pressure for ten to fifteen minutes. These scratches were in parallel lines, one-sixteenth of an inch apart, and subsequent similar scratches were made at right angles with these, thus dividing the skin into a number of minute squares. The process was painless, there was no bleeding nor subsequent scar. These scratches were, however, *vertical* and cut off definitely all *horizontal* supply, of blood to the affected area. But free communication between the almost microscopical vessels of the subcutaneous cellular tissue and the enormously large vessels in the skin above them interfered with complete stagnation of the apparently shut-in blood contained in the vascular ampullæ which had been created, preventing its absorption and the consequent dwindling of the thus speedily emptied vessel. To obviate this difficulty, Dr. Squire now makes his scratches *oblique*. The slants of the second set of scratches thus meeting the slants of the first, and by that time healed up, set of scratches. The continuity of the enlarged blood-vessels is thus interrupted in absolutely every direction; that is, from beneath as well as laterally.

*Multiple Neuromata upon a Feeble Minded Youth, Progressing During Observation.*—Salomon (G.) observed upon a youth aged 21, who complained of severe pains in the loins and inability to walk, tumors over the whole body especially upon the neck and extremities. These were oblately spheroidal, flax seed to almond sized, tense and elastic to the feel. Upon the upper extremities they could be clearly made out following the course of the nerves and were painful on pressure. Sensibility and susceptibility to electricity in every respect preserved. From the region of the



sterno-clavicular articulation a bean sized tumor was excised and proved on microscopic examination to be composed of connective tissue fibrils permeated by pulp-holding nerve filaments. New nodules appeared slowly or very rapidly while the patient was under treatment. The patient was deaf in both ears, morally and intellectually deficient from youth up and had, as had also his sister, an evident asymmetry in the formation of skull and features. Of the parents nothing was learned.—*Charité-Annal.* IV. 1879, p. 133.—*Centrbl. f. d. Med. Wissensch.*, August 2, 1879.

*Leprosy.*—Professor Hyde showed at the Dermatological Clinic of Rush Medical College, Chicago; on December 12th, 1878, a case of anæsthetic leprosy in a sailor aged 42 years, born in Oswego, New York. It illustrated well, the polymorphism of the disease there existing coincident ciliary and superciliary alopecia, bullæ, frontal erythema, atrophic patches ranged along the tracts of certain nerves, plates of pigment anomaly, crusted ulcers, adenopathy, anæsthesia, muscular atrophy and obscure nutritional changes in the skin and nails.—Reprint from *American Practitioner*, February, 1879.

*Tubercular Leprosy.*—Professor Hyde showed at his Dermatological Clinic, September 28, 1879, a case of tubercular leprosy in a farmer aged 43 years, born in Angermanland, Sweden. There was absence of a history of hyperæsthesia, of large insensitive atrophic patches, or well-defined relatively pigmentless areas, of crusted ulcers profoundly involving the integument, and of anæsthesia distinctly limited to certain tracts of the integument. The intimate relationship of the two varieties were manifest, however, in the similar features of the case, namely; a history of bullæ, much less noticeable in the present instance, the ciliary and superciliary alopecia, the inguinal adenopathy and the constitutional cachexia then existed here in addition a bacon-like plâque over the right elbow, smooth, yellowish-red, firm and solid; nodules upon the forehead, forearms and legs; nodulation of lobes of ears; tubercles of the larynx and vocal cords; general dyschromia; bronzed legs and feet with numbness. Leprosy is hereditary, but not contagious. A daughter of this patient suffers also from leprosy.—Reprint from *Chicago Medical Journal and Examiner*, December, 1879.

*Case of Multiple Carcinoma of the Skin.*—Röseler reports a phe-

nomenonally horrible case of diffused cancer, the whole surface of the body resembling a map in high relief of a mountainous region. Appended are a lithograph of the patient and a chromolithograph of the parts most affected. As to extent the case is a unicum.

The clinical course was equally remarkable. There was not a sign of any primary specific affection; N. B.—The patient had undergone repeated examinations for other reasons during the previous two years. Nodules showed almost at once throughout the panniculus adiposus, increased rapidly in number and extent and in about six months burst everywhere through the skin. In about seven weeks more, death supervened.

The patient was a female, aged about 50 years, always delicate and brought up in an orphan asylum. She married at 20, had given birth to seven children, nearly all below par as to health, and suffered, like a sister, from slight curvature of the spine which became worse after each childbirth. She had suffered for several years from retroversion of the uterus, cervical endometritis and metrorrhagia.

The tumors were knobbed and hard as bone. They developed more speedily on the upper than on the lower half of the body. The skin had at first appeared red and stretched and formed over the highest part of the tumor a conglomeration of yellow vesicles. From this, cancerous ulceration was soon produced rapidly followed by death from exhaustion.

In the stomach was found cancerous infiltration of a spot as large as the palm of the hand, superficial and apparently of recent origin. Other organs healthy. Panniculus adiposus crowded with nodules from pea to egg size.

While theory and experience would point to the stomach as the starting point of an initial carcinoma and to the lymphatic system as the carrier of the infecting elements, the clinical course speaks in favor (compare Kolaczek. Virch. Arch., Vol. LXXV, page 339) most decidedly of a primary and coincidently multiple origin in the skin alone.—*Virchow's Arch.* Vol. XXVII, p. 372.

*Etiology of Malignant Tumors.*—Lang has been experimenting in the theoretically fertile and practically extremely sterile field of origin of cancers. He disbelieves the “zymotic” nature attributed to tumors by Simon and Creighton; the “katalytic” propagation

of Virchow, Weber, etc. ; the "embryonically existent predisposition" of Cohnheim ; the "contact-infection" of Lücke and Reineke ; and the "incompatibility of temperament" of Beneke. Heterotopic and heterochronic experiments were made upon dogs of all ages by the insertion of one sort of tissue into parts of the body where such tissue did not normally exist or by the insertion of tissue of an age different from that of the similar one into which it was placed. In some cases the same animal served as furnisher of the material grafted as well as recipient, in others, different dogs were made use of. The tissues employed were finely minced upon a dish heated to 38° C., and then suspended in an equally warm  $\frac{1}{2}$  per cent. solution of carbonate of soda. Finally, the injection was made by means of a Pravaz syringe also warmed. The substances employed embraced skin and its glands, mucous membranes and glands, nipples and breast glands, cartilage from the ear, joints, and epiphyses, and young bone-tissue. One hundred and sixty-five such injections were made into subcutaneous tissues, glands, vessels and cavities of the body, six dogs died or were lost, seven were under observation for a long time, and four are still so. No tumors appeared in any case. Lang is inclined to attribute such growths to malnutrition, the predisposing cause to be sought for in the nervous system and being often extra peripheral or central. Analogous would be the temporary condition of urticaria. The good effects of diet, arsenic, etc., maintained by Billroth, Esmarch, Scolosuboff, Hofmann and Ludwig might be thus explained.—Reprint from the *Wien Med. Presse*, Nos. 16, 18, 20, 1879.

*A Contribution to the Knowledge of Angiosarcomata.*—Maurer reports three cases of angiosarcomata of simple stricture with exquisite melanosis of their cell elements, and would limit the definition of this sort of new formation more than Kolaczek (*Ueber des Angiosarcom. Deutsche Zeitschrift f. Chirurgie. Bd. IX*). The first case, "melanosarcoma of the skin," was as large as an apple and nodulated, one-third of it covered by normal skin partially ulcerated, the rest by a thick fibrous envelope. On section the fundamental color was deep black, here and there grayish and crossed by irregular black lines. Various sized districts were circumscribed by connective tissue septa and composed of a mass of fine tubes no larger than threads which under the microscope proved to be capil-

lary blood vessels and were most evident where the pigmentation was least, though existing everywhere. Towards the periphery the tumor was hard, towards the centre it grew softer in consistence. The capillary vessels contained blood corpuscles, their endothelium was thickened and bordered by numerous small round cells, the adventitia was composed of a thick layer of large round cell elements with a finely granulated protoplasm, and a large, dark, often double, nucleus, with a single, or at times double, nucleolus. Between the vessels lay a finely fibrillar connective tissue, containing large, round and spindle cells, the latter preponderating towards the periphery. The small cells around the thickened endothelium tubes had the character of lymphoid elements and were evidently wandering cells which had passed through the walls of the capillary vessels. This represents the process of inflammation. These were immediately surrounded by the sarcoma cells which, when the former were absent, bordered directly upon the endothelium tubes. When the lymphoid cells were lacking it showed that the inflammatory process had terminated. It could not be proved that these passed directly into the condition of sarcoma cells. Maurer would call this case one of "angiosarcoma melanoticum."

The second case was from the parotid region, and as large as a walnut, its consistence firm, its surface veined like marble. In the centre lay a brownish red mass half a centimetre in diameter from which projections extended towards the periphery. The mass was bounded by a dark layer, a millimetre in diameter, which in its turn sent numerous small tendrils out into the surrounding tissues. The mass proved to be extravasated blood containing numerous granules of coloring matter, the enveloping dark layer was connective tissue and contained numerous capillary vessels and between the individual fibrillæ long rows of juxtaposed red blood globules and lymphoid cells. The fine septa projecting from the connective tissue envelope held numerous well-preserved blood globules, showed pigmentation within their cell elements, and circumscribed variously sized space, like alveoli, the contents of which were composed of trabeculæ, either straight or bent, and furnished with projections, and composed of granulation cells. Surrounding these trabeculæ was a manifold layer of large round cells one row pressing so closely upon the next as to cause flattening and a cylindrical form. In the

axes of these trabeculae were plainly marked tubes of endothelium containing rows or heaps of red blood globules. We have here a new formation of capillaries with small-cell infiltration of their walls and sarcomatous change of the same, which, impinging immediately upon each other with their interlacing threads of protoplasm, form a net-like web between each two of them, this web being larger the farther apart the capillaries are from each other, and, the vacuoles being more than the protoplasmic threads in amount, an almost translucent condition macroscopically is produced in the tumor, since the pigmentation lies in the protoplasm. The intensity of pigmentation varied throughout the tumor.

The third case, from a man aged 42, was upon the volar aspect of right wrist. For 15 years before and without known cause it appeared and remained unchanged for eight years, then for five years it increased in size and became painful. During the last two years it acquired half again the size of a silver dollar and the administration was needed of four subcutaneous injections of morphine per diem on account of the very severe pain. Large veins covered the tumor, swelling on compression with pain but becoming smaller as did also the whole tumor when the hand was suspended in a sling. It was excised. Microscopically the tumor was composed essentially of structureless or fibrillary stroma in which were embedded numerous vessels and variously shaped groups of small round cells with a large nucleus and a thin bright border of protoplasm. Towards the periphery this stroma was opaque, fibrillar and rich in connective tissue cells; toward the centre the fibrils and cells became less frequent, the tumor more transparent and took on the mucus like condition of a myxoma (angiosarcoma myxomatiforme). Veins preponderated over arteries in this tumor and the pain appeared to arise from compression of nervous filaments. The walls of the abundantly new-formed vessels underwent also in many cases mucous or hyaline change. Melanos of both stroma and cells existed. Sarcoma cells lined the walls of the vessels and it is the intercellular substance of the external layers of these cells which according to Maurer become affected by the hyaline degeneration which takes its origin in the stroma between the vessels. Arndt (Virch. Arch. Bd. 41, page 461) holds that it is the cells themselves which swell.—*Virch. Arch.*, Bd. 77, p. 346.



## RESTORATION AFTER THE HAND IS COMPLETELY SEPARATED FROM THE ARM.

By L. L. STATON, M. D., Tarborough, N. C.

I desire to place on record the following, unusual, and so far as I know, the only case of the kind ever given to the profession :

On Friday afternoon, February 5th, 1880, I was called to see Mary Sumlin, a white girl aged eleven years, quite anæmic and rather small for one of her age. While helping her mother to procure fire-wood she placed her hand in the way of an axe, and at one blow had it severed from the styloid process diagonally across the trapezium passing through the scaphoid bone and posterior annular ligament *dividing all the muscles, bones and blood-vessels, and completely separating the hand from the arm* excepting a small portion of skin, below the articulation, with the ulna, the hand was hanging at right angles to the arm when I saw her, about thirty minutes after the accident.

I determined at once upon amputation, at the joint above (the wrist) so returned to my office, a distance of a half mile, to procure the assistance of another physician ; but finding this impracticable, I proceeded carefully to replace the hand which was held securely in position with silver wire sutures and adhesive plaster.



In dressing the wound the patient complained of pain when I used the needle in the arm, but none when it was used in the hand.

I secured the hand and arm upon a broad splint and directed that they be kept warm by being wrapped in hot flannel cloths.

I saw her twelve hours afterwards ; the hand was very much swollen ; no sensation or pulsation could be detected nor had she complained of any pain, but rested quietly during the night.

I saw her the next day, she now complained of a little pain, but the hand and arm presented the same appearance as of yesterday.

Saw her upon the third day ; could now plainly feel pulsation in the hand, it had changed its color, and I now for the first time thought it possible to save the hand. From this time she did not have a bad symptom, nor was there any suppuration or secretions of any kind, the wound healed entirely by first intention.

I removed the sutures upon the fourteenth day, and afterwards she carried the hand in a sling and is now able to extend the fingers and grasp with nearly the usual strength. There is no ankylosis of the wrist joint as I expected.

I send a photograph of the hand at the time of the removal of the sutures.

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*Hydrofluoric Acid Inhalations in Diphtheria.*—Henri Bergeron has read a paper before the Société de Médecine on the above method of treating diphtheria. He has tried it in twenty-four cases, out of which seventeen were severe, and he has had five deaths, four of these being infants. The dose he has found suitable is one gramme for each cubic metre which the apartment contains, evaporated in the space of three hours. He claims (1) that the inhalations thus have never produced injurious results. (2) All who have been submitted to this treatment for forty-eight hours were cured. (3) The false membranes do not persist beyond the fifth day. (4) In no case has he observed paralysis supervene in the soft palate or elsewhere. (5) No case of contagion has occurred among the attendants or the household.—*The Medical Press and Circular.*

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When the news came of the revolution in Turkey and the deposition of Abdul Aziz, Queen Victoria, it is said, lost no time in intervening in his behalf, by telegraphing to Constantinople and expressing her hope that the ex-Sultan would not be subjected to any violence or ill-treatment. “*Soignez le bien*”—Take good care of him—said her majesty ; but the cruel telegraph made her say, “*Saignez le bien*”—Bleed him well ; and how they bled him all the world knows.—*Med. and Surg. Reporter.*

## CLINICAL REPORTS.

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### VERATRUM VIRIDE IN PUERPERAL CONVULSIONS.

By M. D. PHILLIPS, M. D., Dalton, N. C.

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On the 11th of April I was summoned to attend Mrs. S., a muscular, plethoric, young woman, in her first labor. I arrived at 5 o'clock P. M., and learned, that labor began at 12 M. The pains being not more than five minutes apart, of short duration, irritable, and spasmodic. I found the os well dilated, and the soft parts apparently favorable. The presentation and position were normal, and nothing of note occurred until the process of rotation began, when labor became more tedious, which I recognized to be due to a disproportion between the dimensions of the pelvis, and those of the foetal head. All the while the pains maintained their frequency, short duration, and violent force. Slowly and laboriously parturition continued until 12 o'clock, midnight, when the head began to press upon the external soft tissues. The pains became more violent, with intervals of but slight remissions, while the agony was more intense. While engaged in supporting the perineum, I felt a slight convulsive twitch of the patient, followed by an absence of all motion, which struck me as of portentous omen. Glancing up at the countenance of the patient, I beheld a congested face, averted eyes, prominent with a maniacal stare. I stood one moment in breathless expectation, when—off she went into a convulsion.

I had never seen a case of puerperal eclampsia, much less had I ever had to cope with one. Impressed, that nothing short of self-possession and prompt action would be equal to the emergency, I threw a fillet round the arm and opened a vein; but, as the flow was too inconsiderable to be of any therapeutic value, I opened a vein in the other arm; the flow from the last was some freer; but too scanty to be relied upon. Foiled in my attempt at blood-letting, I cast about for some other resource,—when *veratrum viride*, *hypodermically*, flashed upon my mind. All this while, the patient was writhing, more or less, with a turgid and suffused face, to which were added, to complete the very ideal of mortal agony, bloody frothing and stertorous breathing.

While assistants restrained the convulsive movements of the

fore-arm, I injected seven drops of Norwood's tincture. I bided my time, though with no little anxiety as to the result. In about four minutes, I suppose, consciousness returned, ended by copious vomiting. The patient was threatened with a second convulsion, but it did not proceed beyond a loss of consciousness. The perineal muscles became more relaxed under the influence of the veratrum, and parturition advanced to its completion. Upon the escape of the head, the child made one or two feeble gasps, after which respiration seemed to have ceased. I hurried the delivery, and by inflation, of the lungs, with other means of artificial respiration, induced after intermittent respiratory efforts, which I nursed into vigorous breathing. The child seeming safe, I looked after the mother, whom I found quiet, with a pulse of *fifty six*, regular, and of fine volume.

Reported cases of the efficacy of veratrum in puerperal convulsions, have appeared in the medical literature of the past few years, one of which comes from a physician of this State, and is to be found in the May number, 1879, of the NORTH CAROLINA MEDICAL JOURNAL.

Since rational empiricism is the only road to therapeutic knowledge, I report this case, that it may become one of the data from which, by inductive philosophy, the profession shall ascertain whatever degree of virtue that may be in veratrum viride, in the treatment of such an appalling condition as puerperal eclampsia.

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*Bloodless Amputation of the Cervix Uteri.*—A very simple method of rendering an amputation of the cervix was recently improvised by Dr. Wm. J. Love, of Wilmington. Although an Emmett's tourniquet was at hand, he fixed the uterus and drew it down with a double tenaculum; then passed a round rubber ring, over the tenaculum and passed it on to the cervix, and beyond the diseased tissue. To keep the ring in its place the uterus was transfixed with a hare-lip pin. The amputation was then performed without loss of blood, or obscuring of the line of incision.

## SELECTED PAPERS.

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### A NEW THEORY OF THE ACTION OF MERCURY.

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Dr. S. V. Clevenger, in the *Chicago Medical Gazette*, proposes a new theory of the action of mercury.

The *modus operandi* of mercury, in common with that of many other drugs whose effects are so manifest and direct, has, heretofore, received no satisfactory explanation. The theories advanced have been largely mere conjectures. Dr. Clevenger's theory is that mercury acts purely mechanically, and the experiments he records in support of his views certainly seem to corroborate these views. The metallic mercury applied externally may enter the circulation is not doubted by the physiologist, the demonstration of the possibility being a standard physiological experiment. Dr. Clevenger's theory comes in conflict with that usually entertained (if it may be said that any theory is generally accepted), in the dealing with salts of mercury. He maintains that these salts are reduced either before absorption or soon after, and that as salts they do not circulate, their being no recombination after the primary decomposition. The metallic mercury in the blood is carried unchanged into the glandular tubules, and forces its way to their blind extremities, and by their superior weight displacing the occupants of these tubules, be they normal or morbid matter. In this manner mercury acts as a deöbstruent on the same principle as that in which cannon balls dropped into a pipe removes matter of lesser specific gravity. In the intestines the increased peristalsis excited by the foreign substances facilitates the progress of the minute globules, and their reaching the hepatic parenchyma. The presence of the mercury in the salivary glands stimulates their secretion, and, being a foreign substance seeking for egress, sets up the changes characteristic of mercurial salivation.

“Mercurials load the circulation and emunctories with effete matter because of their deöbstruent effects and ability to insinuate their particle among all tissues, separating the morbid or ulcerated portions from the healthy, by the great and universal law of heavy bodies acting in the line of “least resistance.” If the bile is improperly diverted or suppressed, it restores it, by opening the



channels through which it normally flows ; if superabundant from organic obstruction it would regulate its quantity in the same way by affording exit for morbid causes. Its aplastic action is ascribable to the capillary and lymphatic cleansing its passing would produce ; the million minute globules pushing open circulatory channels and preventing accumulation, as well as affording means for absorption. Provisional callous and wound healing would be interfered with by the globules breaking up new tissue and interfering with its formation as would any foreign substance. Mercury has been retorted over in considerable quantities from the bones of those who have died from mercurial cachexia, the little particles finding stopping places in the cancellated tissue removed from more active circulatory influences, and, in excess, doubtless dissecting away the periosteum, filling the lacunæ and canaliculi, thus unavoidably producing caries."

"The occasional tonic influence of the metal would follow wherever glandular obstruction was superinducing diminution of the red blood corpuscles, as insomnia may be overcome by bromides removing the cause, while no one assigns the bromides a place among hypnotics.

Mercury is not a tonic ; but if it increases secretion, removes obstructions and sets the corpuscular manufactories in order as it does the biliary, it induces tonicity as the bromides induce sleep.

But mercury also causes anæmia, which might be expected by persisting in its use, remembering its oclusive power in closing the minute passages and tubular structures which, in medicinal quantities, removed preëxisting obstructions.

Mercury in larger doses diminishes the number of red blood corpuscles and produces anæmia, emaciation, ulceration, febrile symptoms, with a peculiar "jerking, thready" pulse. Obviously an affect which might be salutary upon the glandular system, wrought by small doses, could become pernicious by over doses, and hæmotosis be seriously interfered with by the vascular stasis induced by mercurial plugging of the arterioles and venioles. Any irritation causing perversion of the hepatic and splenic functions, certainly could only be followed by hæmic degeneration, and I am inclined to think that the pulse characterizing hydrargyria is due to the irregular but frequent propulsion of blood by *vis a tergo* clearing of the

lesser vessels where the metallic globules had for a while backed up the current until forcibly overcome. This brings us to the consideration of the nervous phenomena among its toxic effects.

As to the so-called "specific" reputation of mercury in syphilis treatment, and its *modus operandi*, I might be excused detailing probabilities until the pathology of the complaint is better understood. The disposition of the virus being to centralize itself upon and destroy certain areas, it seems likely that the metal may, by attacking such weakened points, not only break them down, but prevent the static degeneration necessary for ulcerative processes. This, with the antagonism of the metal has for occlusion anywhere except what it induces itself in great doses, would suffice as a tentative view until we demonstrate exactly the cause of both the disease and its cure.

The incendiary can do no harm to society while the police are alert and keep him "moving on." Syphilis, though in the blood, may not manifest itself if sufficient globules are chasing it from forming nuclei; but where the fluids of the body are saturated with syphiliting points enough to produce tertiary symptoms, how futile must any attempt be to restore health by any doses of the drug under consideration. The disease itself is depleting the system at this stage, and mercury but adds to the trouble, having more carious and degenerated spots to work upon.

In short, at this period both syphilis and mercury will fraternize against the body as against a common enemy. Tonics might arrest the cachexia induced by either or both, and in addition the iodides which are known to act upon this disease and its putative cure should be given.

Dr. Clevenger's views have the advantage of being definite, at least, and their plausibility will, we think, be very generally conceded although they may fail to satisfy. They are certainly noteworthy and have in them the possibility of a revolution in the therapeutics of many diseases which mercury and its salts have been empirically and blindly administered.—*Michigan Med. News.*

## DIGESTIVE FERMENTS AND THE PREPARATION AND USE OF ARTIFICIALLY DIGESTED FOOD.

By WILLIAM ROBERTS, M. D., F. R. C. P., F. R. S.

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### DIGESTION OF STARCH.

The importance of starch as an article of human food has, perhaps, scarcely been duly recognized. If we regard the enormous proportion in which the seeds of cereals and leguminous plants and the tuber of the potato enter into our dietary, and the immense percentage of starch in these articles, it is probably not too much to say that fully two-thirds of the food of mankind consists of starch.

In the raw state, starch is to man an almost indigestible substance; but when previously subjected to the operation of cooking it is digested with great facility.

Diastase has only a feeble action on the unbroken starch granule, even at the temperature of the body. In the lower animals, and in germinating seeds the starch granule is probably attacked in the first instance by some other solvent, which penetrates its outer membranes, and thus enables the diastase to reach and act on the starchy matter contained within. By the aid of heat and moisture in the process of cooking, the starch granule is much more effectively broken up. Its contents swell out enormously by imbibition of water, and the whole is converted more or less completely, into a paste or jelly or mucilaginous gruel. It is in this gelatinous form exclusively, or almost exclusively, that starch is presented for digestion to man.

The digestion of starch is accomplished by the saliva and pancreatic juice, both of which are rich in diastase. Diastase also exists abundantly in the liver, and in smaller quantities in the intestinal juice in the blood, the urine, and apparently in all the interstitial juices. Diastase from all these diverse sources appears to act substantially in the same manner on starch, changing it by a progressive hydrolysis into sugar and dextrine.

If the action of a fluid containing diastase—say saliva or extract of pancreas—on starch paste be watched, the first effect observed is

the liquefaction of the paste and the production of a diffuent solution. This change is effected with great celerity—in two or three minutes the stiff paste becomes a watery liquid. This is evidently a distinct act, and antecedent to the saccharifying process which follows. By operating with small proportions of diastase and large proportions of pure starch paste it is possible to hit on a moment when liquefaction is complete and saccharification is not yet begun. At this moment the solution yields a pure starch reaction, and no reaction of dextrine nor of sugar. The process of saccharification follows immediately on the heels of liquefaction; and in ordinary manipulations the one process runs into the other.

The speed of the action depends primarily on the proportion of the diastase. By adjusting the proportions of diastase and starch in such degrees that saccharification will be completed in about a couple of hours, the successive steps of the process can be leisurely followed by applying from time to time the appropriate tests.

If you test as soon as liquefaction is complete you get a pure blue with iodine and a slight reaction of sugar with Fehling's solution. In a few minutes the sugar reaction becomes more decided; and although you still get a pure blue with iodine in the ordinary way of testing, you will get, by greatly diluting the blue solution and then adding more iodine, a deep violet tint—showing the presence of erythro-dextrine mixed with starch. The next step is the total disappearance of the blue reaction with iodine, and the substitution for it of an intense reddish-brown coloration of erythro-dextrine. By-and-by the reddish-brown color is replaced by a yellowish-brown—indicating the preponderating presence of a different kind of erythro-dextrine. Meanwhile the sugar reaction goes on increasing. The next step is the entire disappearance of any kind of coloration with iodine. But the action is still very far from complete—the proportion of sugar goes on increasing for a considerable time after iodine has ceased to tint the solution. At length, however, matters come to a standstill, and the proportion of sugar ceases to increase.

The explanation of this series of reactions is impossible on the old view of the constitution of starch. Until recently it was supposed that the starch molecule was represented by the comparatively simple formula  $C_{12}H_{20}O_{10}$ , and that under the influence of diastase

this molecule was resolved by hydration into two molecules—one of dextrine, and one of grape-sugar.

The researches of Musculus and O'Sullivan have shown that this is not a correct account of the transformation. In the first place it was found that the sugar produced was not grape-sugar (dextrose), but another kind of sugar called *maltose*. It was also found that the dextrines first produced, and which were colored red or brown by iodine, were progressively changed, with simultaneous production of sugar, into a series of dextrines of a lower type which did not yield any coloration with iodine. To these latter kinds of dextrine the term *achroo-dextrines* has been applied.

As maltose is now ascertained to be the kind of sugar which is mainly produced in the digestion of starch by diastase, this body assumes a new and considerable importance to give some description of its properties. Maltose is a fermentescible, crystalline sugar of saccharose (cane-sugar) class, having very little sweetening power, and possessing one atom less water than grape-sugar. Its formula is  $C_{12}H_{22}O_{11}$ . It possesses more rotatory power on polarized light than grape-sugar, but has considerably less power of reducing cupric oxide. The rotatory power of maltose is +150, that of grape sugar +58. The reducing power of maltose is 61, compared to that of grape-sugar as 100. Maltose can be hydrolyzed into grape-sugar by prolonged boiling with dilute acids. Malt-diastase does not possess this power, but we shall presently see that the diastatic ferments of the small intestine are able slowly to effect the same change.

The researches of Musculus and O'Sullivan have rendered it necessary to assume that the molecule of soluble or liquefied starch is a composite molecule, containing several members of the group  $C_{12}H_{20}O_{10}$ —which is to be regarded as the constituent radical of the composite starch molecule. The starch molecule must in the future be represented by the formula  $n(C_{12}H_{20}O_{10})$ —the value of  $n$  not being yet definitely agreed upon.

Two able chemists of Burton-on-Trent, H. T. Brown and J. Heron, have extended these researches, and fully confirmed the main conclusions of Musculus and O'Sullivan. In a recent publication (*Jour. Chem. Soc.*, September, 1879) they have for the first time presented a fairly complete scheme of the succession of changes undergone by starch under the action of diastase. These chemists



assume that the molecule of soluble starch consists of ten members of the group  $C_{12}H_{20}O_{10}$ , and that its formula should be written  $10 (C_{12}H_{20}O_{10})$ . This view greatly facilitates the comprehension of the progressive hydrolysis of starch by diastase.

We have seen that starch in the condition of paste or <sup>4</sup>jelly is distinguished sharply by its physical properties from liquefied or soluble starch. There must, therefore, in all probability, be some difference of molecular aggregation between starch in these two states; and it will not be a very bold assumption to suppose that starch in the gelatinous state consists of still more complex molecules than soluble starch, and that several molecules of soluble starch are grouped together to form the molecule of starch in the gelatinous state.

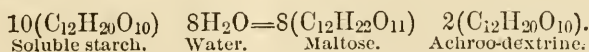
On the ground of these assumptions we may represent the successive steps of the digestion of gelatinous starch by the following series of equations.

The molecule of gelatinous starch  $=n(C_{12}H_{20}O_{10})$  is first resolved into  $n$  molecules of soluble starch. The molecule of soluble starch is then resolved by progressive deduplication and hydration into dextrine and maltose by the following succession of steps:—

One molecule of soluble starch  $=10(C_{12}H_{20}O_{10}) + 8(H_2O =$

- |                               |                           |                         |          |
|-------------------------------|---------------------------|-------------------------|----------|
|                               | ⏟                         |                         |          |
| 1. Erythro-dextrine $\alpha$  | $9(C_{12}H_{20}O_{10}) +$ | $(C_{12}H_{22}O_{11})$  | maltose. |
| 2. Erythro-dextrine $\beta$   | $8(C_{12}H_{20}O_{10})$   | $2(C_{12}H_{22}O_{11})$ | “        |
| 3. Achroo-dextrine $\alpha$   | $7(C_{12}H_{20}O_{10})$   | $3(C_{12}H_{22}O_{11})$ | “        |
| 4. Achroo-dextrine $\beta$    | $6(C_{12}H_{20}O_{10})$   | $4(C_{12}H_{22}O_{11})$ | “        |
| 5. Achroo-dextrine $\gamma$   | $5(C_{12}H_{20}O_{10})$   | $5(C_{12}H_{22}O_{11})$ | “        |
| 6. Achroo-dextrine $\delta$   | $4(C_{12}H_{20}O_{10})$   | $6(C_{12}H_{22}O_{11})$ | “        |
| 7. Achroo-dextrine $\epsilon$ | $3(C_{12}H_{20}O_{10})$   | $7(C_{12}H_{22}O_{11})$ | “        |
| 8. Achroo-dextrine $\theta$   | $2(C_{12}H_{20}O_{10})$   | $8(C_{12}H_{22}O_{11})$ | “        |

The final result of the transformation is represented by the equation—



We must conceive that the energy of the ferment is exercised in gradually pulling asunder the component groups or radicals of the unstable molecule of soluble starch—detaching one after another from the parent molecule—each radical as soon as detached assum-

ing an atom of water and becoming an atom of maltose. At each detachment the parent molecule draws its remaining groups together to form a new kind of dextrine. As the process goes on the dextrine becomes smaller and smaller—that is contains fewer and fewer component radicals—the higher dextrines giving a red or brown coloration with iodine, but the lower dextrines giving no reaction with iodine.

It is to be noted that after the transformation has reached its final term there still remains a portion of achroo-dextrine unconverted into maltose. Upon this remnant diastase has only a very slow action. The percentage result, when the reaction is completed, gives in round numbers eighty parts of maltose and twenty parts of achroo-dextrine. The eight varieties of dextrine indicated in the above table of equations have not all been obtained in the separate state, but there is strong evidence of the existence of at least several of them as distinct bodies.

The account just given of the transformation of starch has been deduced from a study of the action of diastase derived from malt. The question arises—physiologically an important question—whether the action of salivary and pancreatic diastase is identical with that of malt-diastase. The researches of Musculus and V. Meering give an affirmative answer to this question. These observers found that saliva and pancreatic extract act on starch paste in the same way as malt-diastase, the final products in all cases achroo-dextrine and maltose, and not dextrose (grape-sugar). At my suggestion Mr. H. T. Brown was good enough to submit the question to a fresh examination in regard to pancreatic extract. His results fully confirm the conclusions of Musculus and V. Meering. He found, however, that there was a slight difference in the results when the action of pancreatic extract. His results fully confirm the conclusions of Musculus and V. Meering. He found, however, that there was a slight difference in the results when the action of pancreatic extract and malt-diastase on starch were continued a long time. The pancreatic ferment, in addition to the power, which it shares with malt-diastase, of slowly converting the lowest achroo-dextrine into maltose, exhibited a power of slowly changing maltose into dextrose (grape-sugar), which is not possessed in any degree by malt-diastase. Mr. Brown also informs me that

there is in the small intestine a ferment which possesses similar properties.

#### THE RESPECTIVE SHARES OF SALIVA AND PANCREATIC JUICE IN THE DIGESTION OF STARCH.

The respective shares of saliva and pancreatic juice in the digestion of our farinaceous food is probably variable, and perhaps not quite identical.

As all our farinaceous food is eaten after being cooked, the starch in it is more or less completely gelatinized; it is, therefore, probable that one of the chief uses of salivary diastase in man is to liquefy starch jelly. A very brief contact suffices for this, and it is manifest that the accomplishment of this change is an important advantage in the subsequent operations in the stomach. Our gruels, blanchmanges, puddings, and similar farinaceous dishes owe their thick pasty condition to starch in the gelatinous state, and nothing can be imagined more resistant to the rapid permeation of the meal by the gastric juice, and to the pulping of it into a uniform chyme, than the presence of coherent masses of starch paste. If the saliva performed no other service than this it would furnish an important aid to digestion of a meal.

There has been considerable dispute as to whether, and how far, the saccharification of starch goes on in the stomach. My observations lead to the conclusion that this depends on the degree of acidity of the contents of the stomach; and it is known that this varies within very wide limits. When a meal is swallowed it takes some time for the gastric juice to permeate the mass, and the acidity of the gastric contents is for some time very feeble. As digestion proceeds the contents of the stomach tend to become more and more acid. This is a point which each one can observe for himself. The stomach is by no means reticent of its doings. The possetting which we see goes on in a less degree in the adult; and we are perforce made aware, sometimes inconveniently so, by our palates, of the ascending scale of acidity in the stomach. Saliva acts energetically in neutral and in slightly acid media, but its activity is checked, and finally arrested, when the acidity becomes pronounced. When digestion is proceeding comfortably and normally a certain interval elapses before the acidity of the stomach becomes considerable, and during this interval the salivary diastase continues active,

and has time to accomplish a good deal of work. But we must remember that our farinaceous food is, for the most part, not in the most favorable condition for rapid digestion. It is not generally in a state of mucilage, but in the form of a solid paste, as in bread, puddings, and pastry. A good deal of it, too, is imperfectly cooked. Consequently, the larger part of our starchy food reaches the duodenum still unchanged, or only partially changed, and this larger part of the work is consummated by the pancreatic juice in the alkaline medium of the small intestine. I shall have to return to this point in speaking of gastric digestion.

It has been noted as curious that the saliva of man possesses more diastatic power than that of almost any other animal. Among the herbivora, which are such large consumers of starch, the saliva has comparatively little diastatic power; and in some, as in the horse, it is almost or altogether wanting. I apprehend that this is due to the fact that man alone has learnt to cook his starchy food, and that the diastatic power of his saliva has become developed with the opportunity for its exercise. Diastatic power would be thrown away in the saliva of the horse, because he eats his food in the raw or uncooked state, and saliva is without action on raw starch.

#### WHEN CAN STARCH BE SAID TO BE FULLY DIGESTED ?

Seeing that in the digestion of starch a number of intermediate products are evolved, the question arises, When can the digestion of starch be said to be accomplished? Is maltose the only product absorbed, or are not the dextrines, especially the achroo-dextrines, also absorbed? The dextrines, even those colored by iodine, are highly diffusible, and pass freely through parchment-paper in dialysis. In this respect they contrast strongly with starch jelly, and even with liquefied (or soluble) starch, both of which are undialyzable. It seems not improbable that the lower dextrines are largely absorbed. Because if we follow the history of starch after it has been transformed by digestion, and absorbed, we are confronted with the remarkable fact that after absorption the products of starch digestion, or at least a large portion of them, undergo a re-conversion in the liver into a substance closely resembling undigested starch. Glycogen, in its essential features, is an exact counterpart of soluble starch. It forms an opalescent solution in water; it is undialyzable, and it is transformed by diastase into dextrine and maltose.

It appears reasonable to suppose that it would be an advantage to the economy if that portion of our starchy food which is destined to be stocked in the liver as glycogen, should be absorbed at an early period of the digestion, because the less removed the digested product is from starch at the moment of absorption, the fewer steps it will have to retrace in recovering the amylaceous state after absorption.

It is not necessary to suppose that the ascending steps of the re-conversion are identical with the descending steps of digestion, but it is probable that they are fundamentally alike, seeing the close similarity of the products at the two ends of the journey. At any rate there is no warrant in the present state of knowledge for the opinion that sugar is the only absorbable product of starch digestion.—*Medical Times and Gazette*.

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#### ASPIRATION OF BLADDER IN RETENTION OF URINE.

W. MACFIE CAMPBELL, M. D., Surgeon to the Northern Hospital, Liverpool.

I must warn the inexperienced that aspiration of the bladder in retention of urine is by no means as safe as some are inclined to believe.

Some time ago, during my absence from home, a case of stricture was admitted into the Northern Hospital. There had been retention for some time, and no instrument could be passed. The aspirator was therefore used by the House Surgeon, with immediate relief. Next day, as catheterism again failed, aspiration was employed again. When I saw him the following day, I managed to pass a filiform bougie, upon which an urethrotome was led, and the stricture divided internally. His progress was good for a day or two, when some inflammation appeared at one of the aspirator punctures; an abscess formed, peritonitis came on, and the man died.

The lesson I have learned by this case is that, if aspiration have been performed, the bladder must be kept up undistended, as the fatal result was evidently due to the distended bladder, after the first aspiration, forcing some urine into the tissues. Tapping the bladder *per rectum* is much safer, and altogether more satisfactory.—*British Medical Journal*.



## REVIEWS AND BOOK NOTICES.

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PHOTOGRAPHIC ILLUSTRATIONS OF SKIN DISEASES. By GEORGE HENRY FOX, A. M., M. D. Forty Light Colored Plates from Life. Parts 7, 8, 9 and 10. E. B. Treat & Co., 805 Broadway, New York.

We have before called the attention of our readers to Dr. Fox's admirable work on Skin Diseases. The numbers now before us illustrate the following diseases : Lupus Vulgaris and Erythematosus ; Epithelioma Superficialis and Rodens ; Trichophytosis Capitis and Corporis ; Lichen Planus and Ruber ; Kerion ; Lepra Maculosa ; Molluscum ; Erythema Multiforme ; Phtheiriasis Capitis and Corporis ; Scabies ; and Porrigo e Pediculosis.

These illustrations have received the warmest commendations from teachers of dermatology, but their value will at once be recognized by any physician who examines them. This work has this great recommendation, that there is some limit to it, the author having set out with the definite purpose of completing it in twelve parts. The illustrations are most faithful permanent photographs by Harroun and Bierstadt's autotype process.

The text is beautifully printed, and aids very greatly in correct understanding of the nature of the diseases. More especially is the treatment of a most valuable sort. The dreary routine of mercurial and arsenical solutions do not so often appear, and the directions in some of the most dreaded diseases give good promise of success.

The nomenclature adopted varies from that so well known, and it is a pity that we have to burden ourselves with it. Still, all the changes adopted seem to have a rational significance.

We trust that the author will find his undertaking of sufficient pecuniary success to induce him to give us another series to include some of the syphilitic and other diseases among negroes.

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COMMON MIND-TROUBLES, AND THE SECRETS OF A CLEAR HEAD.

By J. MORTIMER GRANVILLE, M. D., M. R. C. S. Philadelphia : D. G. Brinton, 115 South Seventh Street. Svo. Pp. 185.

The work is a popular treatise on the hygiene of the mind. These essays the author tells us " were not written for persons who have

professionally investigated the phenomena of which they treat. The sole purpose has been to seize on a few salient difficulties and grapple with them in the interests of self-help. The key-note of the theme is the presumption that there is often—if not generally—a stage of conscious embarrassment preceding mental derangement or mind weakness, and while this condition exists there is hope in the power of repair and self-recovery which exists in the mind not less than in the body."

The subjects treated are :

Part I.—Mental Failings, Defects of Memory, Confusions of Thought, Sleeplessness from Thought, Hesitations in Speech, Low Spirits, Good and Bad Tempers, Mental Languor and Listlessness, Morbid Fears, "Creatures of Circumstance."

Part II.—Temperature, Habit, Time, Pleasure, Self-Importance, Consistency, Simplicity, The Secret of a Clear Head.

A GUIDE TO THE PRACTICAL EXAMINATION OF THE URINE. For the use of Physicians and Students. By JAMES TYSON, M. D. Third Edition. Revised and Corrected. Philadelphia : Lindsay & Blakiston. 1880.

This manual has reached a third edition, and is deservedly popular because it is simple and accurate, and handy. The directions for qualitative and volumetric analyses are given clearly enough to guide the student and general practitioner to successful results, with a very little previous training. We know of no means of diagnosis so generally slighted as the examination of urine, and we are glad to see this little work finding its way into so many doctor's offices.

POST-MORTEM EXAMINATIONS WITH ESPECIAL REFERENCE TO MEDICO-LEGAL PRACTICE. By Professor RUDOLPH VIRCHOW, of the Berlin Charité Hospital. Translated from the Second German Edition. By Dr. T. P. SMITH. Philadelphia : Presley Blakiston, 1012 Walnut Street. Pp. 145. Four lithographs.

When this manual first made its appearance from the English press it received very hearty commendation. In its present form it is much more valuable, because of the addition of lithographic illustrations.

Professor Virchow gives three interesting cases in which the post-mortem examinations were performed by himself, the order of sequence enjoined by the regulations being closely adhered to. They may be taken as examples of the way in which all post-mortem examinations for medico-legal purposes should be conducted.

The second part of this work contains the German regulations for the guidance of medical jurists in conducting post-mortem examinations for legal purposes. Our readers are already familiar with these regulations, perhaps, as they are in use by the Superintendents of Health in each county, having been adopted by the North Carolina Board of Health two years ago.

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*Rules for the Use of the Forceps.*—In the course of a recent discussion on the use of the obstetric forceps, in the New York Academy of Medicine. Dr. Fordyce Barker said that there were certain rules which he regarded as well established. 1. In that form of contraction of the superior strait called the oblique oval of Naegele's, the forceps should not be used, but we should always resort to version. 2. In that class of cases in which the contraction is at the inferior strait, with a straight sacrum instead of the normal curvature, narrowness of the subpubic arch, etc., we should never resort to forceps, but always select version, if we have the opportunity to make the election by a sufficiently early examination. 3. In face-presentation, we should never resort to forceps when the head is above the superior strait, and not engaged. He would not say that the forceps should never be applied when the head was not engaged at the superior strait; for he knew he had safely delivered several women, where it was necessary to save the life of the mother, when the head was not engaged at all, or was lying loose at the superior strait. But, if the face presented under the same circumstances, we should not resort to the forceps. He had, in at least cases where there was a face-presentation in a contracted superior strait, and the face had become engaged in the strait, been successful in delivering by the forceps, by first flexing the head and converting it into a vertex presentation, and partially rotating it. Then, taking off the blades, he had re-applied them as if it were a vertex. In these cases, it was fortunate that the original presentation was the face, because the vertex would not have engaged in these contracted pelvis if it had presented.

## CURRENT LITERATURE.

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### DYSPEPTIC OR BILIOUS HEADACHE.

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This is also termed *Sympathetic or Sick Headache* by some authorities, and I think rightly so, because vomiting often dispels the pain like magic, the source of irritation being so removed. No headache, however, ought to be termed *bilious*, unless there is so copious a secretion of bile that it either accumulates in the duodenum or regurgitates into the stomach, or the skin is yellow from its absorption into the blood. Dyspeptic headache has its origin in imperfect digestion, and arises either in the stomach or duodenum from the irritating and disturbing of the nervous apparatus of the alimentary canal by the resulting depraved secretion. Indigestion impresses itself on the sensorium by sympathetic action, and originates pain in it; but, though this arises in a few persons only, and not in all whose habits are irregular in eating and drinking, it must still be accepted that there is a tendency on the part of the nervous centres in the brain to be so impressed. A morbid impression conveyed through the sympathetic nerve to the brain would excite disturbance, and act as an agent of transmission.

All the processes of life must be carried on evenly and orderly to insure health. The circulation cannot continue with regularity unless digestion and respiration accord with it; the one is dependent on the other, and the nervous connections of the viscera, if arrested or deranged, propagate the disturbing element to the cerebro-spinal system, through the ganglionic nerves. Thus the unity of the whole is apparent through the intimacy of the physiological relationships; and when we consider for a moment how the action of the heart is disturbed in its functions by derangement of the sympathetic system, it shows clearly how inflammatory or other states may originate disturbance, and produce painful sensations in a distant organ.

The facts which are proved concerning the functions of the par vagum do not warrant the drawing of any exact or precise conclusions from them. What we have to say, then, in reference to the part it plays in the digestive process must be to a great extent uncertain and problematical. It consists of a motor and a sensory

tract, closely united together at their origin in the brain, the one tract being destined for voluntary, and the other for involuntary motion and sensation. This gives it a wider range of action, and its disturbance is manifested by a variety of peculiar sensations, from severe pain on the one hand to exalted sensibility on the other. Excitation of any sensory branch of this compound nerve, after having reached the nervous centre, may be reflected to any part of the periphery, or even to some part in connection with it. So closely, then, is one part of this nerve associated with other parts, that irritation experienced in any single branch may be conveyed along it, and felt in the most distant portion of the nerve's periphery. This kind of irritation, set up by some change or alteration in the trunk or periphery of the various sensitive nerves, is analogous to those cases of reflex paralysis mentioned by Dr. Brown-Séquard. Many paralytic affections (and especially paraplegia) are due, not to disease of the spinal cord or its membranes, but simply to reflex irritation, starting from a sensory nerve or its branches, which have been irritated or excited; and thus we have cases recorded of paraplegia from the cutting of a molar tooth during the second dentition (West, Kennedy, Brown-Séquard), from enlargement and displacement of the uterus, or from ovarian excitement, in hysterical paraplegia, stricture of the urethra, and intestinal worms. These morbid states must take place through the medium of the nervous system, and not through the general circulation, or the paralysis would extend upwards. A case of paralysis of the lower limbs, due to synovitis, from the extension of irritation in the left knee-joint, is described by Brown-Séquard. Now all these cases are caused by the excitation of an afferent nerve, and the reflex paralysis continues so long as the excitation persists. The morbid effect on the muscles is of a transient character, unlike the spasms, twitching, and anesthesia which accompany the paraplegia of myelitis, where all parts are involved, and the tendency of the disease is towards a fatal termination. Mr. Hilton has also recorded the case of a boy who was lame in his right leg, and could neither put it to the ground nor control its movements, yet the real pathological cause was seated in the brain, and not in the limb; the paralysis, in fact, being nothing more or less than a sympathetic disorder occasioned by the febrile state. Mr. Hilton has also shown how the exact seat of disease in



the hip-joint may be indicated by the spot on the knee where the pain is experienced.

The pneumogastric is no exception to this rule, and irritation in the stomach will often occasion a cough—the well-known stomach cough. Sir Thomas Watson relates the case of an epileptic, whose fits ceased with the expulsion of a tapeworm. “I know that a physician of my acquaintance cured a case of epilepsy in this way, somewhat to his own surprise. Without having in his mind any notion of worms, he thought it might be well to purge his patient, who had labored under epilepsy for some time, with the oleum terebinthinæ. The patient, who is the brother of a patient holding at present a high office in this country, was residing two or three miles out of town. In the middle of the night the doctor was summoned to him in a great hurry; the messenger said he was supposed to be dying. He was only intoxicated, however, by the free dose of turpentine that he had swallowed; the next morning he voided into the close stool a large tapeworm, and he has never had epilepsy since. A nobleman residing in Cambridgeshire was long epileptic, and he too got rid of his epilepsy and of a worm at the same time.” Irritation, then, at a portion of the periphery of the pneumogastric may produce either centric or peripheral manifestations. The headache of dyspepsia thus becomes intelligible. Seeing that the nerves of the stomach are derived from the pneumogastric and the sympathetic, we are in a position to understand the immense influence they must exert on the secretions of this viscus. The branches of the pneumogastric, after perforating the muscular coat, ramify in the submucous areolar tissue, until they are lost under the surface of the mucous membrane. “Each unites, not only with large and small branches of its fellow, but with the sympathetic nerves of the stomach, at all stages of their distribution visible to the naked eye—from the solar plexus and semilunar ganglia to the secondary and tertiary offshoots of those around the vessels, and even to their branches in the areolar coat of the stomach.” The distribution of the sympathetic branches is much the same, and, after perforating the muscular coat, the plexuses disappear in the submucous tissue, like the gastric branches of the par vagum. The pneumogastric gives off branches which have been traced into the plexus mesentericus, and so brought in contact with the intestines.

Any irritation, then, of the stomach and intestines may produce headache by sympathetic disturbance.

The influence which the pneumogastric nerve exerts on the action and secretions of the stomach is both interesting and important, and the subject may well be considered in this place. The extensive distribution of the par vagum, and its intimate connection with the sympathetic system, gives it a wide and diversified action; it changes local into general influences, and possesses relations which involve distant organs in excitement and morbid change. The pneumogastric nerve, both physiologically and pathologically, is never lost sight of in any organic or functional disorder, and least of all should it be so in an affection like headache, when its communication with the brain and stomach is so closely united, and the derangement of all parts which it supplies becomes evident in the painful sensations we experience when it is irritated or inflamed.

The mucous membrane of the stomach in a healthy condition is of a pale color when at rest, but immediately an irritant, in the shape of food, comes in contact with it, the mechanical action induced by the friction and motion causes the vessels to dilate, and the surface to become red. The thin, acid, transparent, gastric secretion is poured out even after the nervous supply is cut off from without, though it is largely concerned in the secretion, as we shall see in considering the action of the pneumogastric nerve on the walls of the stomach itself. During fasting, when the stomach is at rest, there is another secretion furnished by its walls, which is thick, ropy and alkaline. The various stimulants, as ether, alcohol, wine and spirits, mustard, and a host of other excitants, cause the gastric juice to issue forth in abundance and to perform a necessary part in the digestive process. Irritation of the afferent sensory fibres causes the gastric vessels to dilate, and the mucous membrane to become reddened, whilst Bernard found that section of the vagi caused pallor of the surface; but it would appear "that the vagus contains two sets of afferent fibres, one of which increases, whilst the other diminishes, the degree of contraction of the gastric vessels."

The close connection of the par vagum with the sympathetic nerve of the abdomen, uterus and ovary, induces reflex irritation in the stomach, which is so commonly observed in affections of these

organs—as dysmenorrhœa, ovaritis, and uterine contraction. When the nerve is divided or injured, any of the parts to which it is supplied may be effected, as violent or spasmodic action, retarded motion of the heart, or congestion or inflammation. Irritation of the gastric branches induces vomiting, but section arrests it, and causes distension of the viscus.

As the par vagum is in immediate relationship with the chief cerebral nerves (the glosso-pharyngeal, the fifth, the seventh, the third, the ninth, and spinal accessory), we may in a great measure realize how its sympathetic disturbance may involve organs which own a different nerve-supply, and are only brought into relation with it through nerve inosculations. The union of the par vagum, therefore, with other nerves may set up far away reflex irritation, as we have seen, but more particularly with the fifth, and with that state of irritability and supraorbital pain which we have seen to follow the introduction of ice into the stomach.

The alliance of the par vagum with the ganglionic supply to the stomach enables us to judge of their continued effects upon the pulse and cardiac circulation; in many acute diseases the cardiac plexus and the solar plexus are brought into close and immediate sympathy, which is inseparable between them. The diseases of the stomach and abdominal viscera produce their full share in prostrating the vital powers, rendering the pulse imperceptible, and causing coldness of the surface and syncope. No better illustration can be found than the effect which a disturbed stomach or a severe bilious attack has on the cardiac circulation, when the nervous power is exhausted and the vessels are weak and dilated. Hence it is that the healthy action of this nerve is essential for the steady performance of the digestive process; and, when digestion fails, the nerve-power will frequently be found at fault. If the strength of the constitution has been reduced from prolonged indulgence in alcoholic stimulants, the nervous energy is the more exhausted, and as the patient cannot assimilate sufficient food to keep the functions of life going steadily, the way is paved for chronic dyspepsia and degenerative changes.

The secretion of gastric juice is effected by the state of the nervous system, and sudden mental emotion is able to stop it altogether. The channel by which this is conveyed clears up any doubt or

mystery attaching to the phenomena ; for the division of the trunk of the pneumogastric controls the secretion of gastric juice and the movements of the stomach. Though the experiments of physiologists like Reid, Schiff, Budge, Longet, Bernard, Ravetsch, etc., show that the stomach gradually recovers its lost tone after division of the par vagum, the functions of absorption and assimilation are enfeebled for a considerable length of time. The division of the sympathetic nerves, also, does not arrest the functions of this organ. But continued disorder of one or other, or of both these nerves, apart from any experimental deduction, proves, I think, to demonstration, that when pain is suddenly experienced at the pit of the stomach from the reception of bad news, they are so affected as to exert a most important influence on the digestive apparatus. The failure of nervous power is obvious enough in the fearful gastralgia and feeble digestion that render the life of some people a burden, and I do not think that even the division of the par vagum at the œsophageal opening or of the splanchnics in the abdomen of the lower animals without palpable and permanent effect on the digestive power, justifies us in setting at nought the agency of the nervous system in man, and still more the importance of the pneumogastric in the production of reflex phenomena.

A genuine bilious headache is less common among women than men, who commit greater excesses in eating and drinking. Young people of both sexes are, however, liable to it. The pain comes on in the morning after a heavy meal the night before, or after drinking too much wine ; or it succeeds a heavy midday meal, if the person is not accustomed to it ; or if the food is hurriedly eaten, and exertion and fatigue follow it. The pain occupies the whole forehead and top of the head, which feel hot and sometimes burning. The face is flushed, and the temporal arteries throb. A heated room, or stooping, brings on extreme nausea, and aggravates the suffering. If the patient avoid taking food he may manage to get through the business of the day, but when evening arrives if he attempts to eat the pallid face is exchanged for one of vascular excitement, and the throbbing headache often culminates in a violent attack of vomiting, after which, when the hope of alleviation has departed, he suddenly and unexpectedly falls asleep and awakes next morning well. An attack of severe retching, with or without the discharge

of frothy mucus and bile from the stomach, will sometimes remove the fit of suffering. Its duration varies from a few hours to three or four days. In some patients it frequently continues a week, and the first sign of amendment is a desire for food with the power to digest it. After the long continuance of severe gastric headaches, the vascular excitement gives place to nervous exhaustion, and as they become more frequent, the nervous element preponderates, so that with the advance of years the bilious character and the vomiting are exchanged for the type of headache which we shall presently describe. But one form of headache during its continuance may partake of the character of several types. That which begins as a purely bilious may end as a nervous headache, and that which begins as a nervous may terminate as a bilious headache, so great is the sympathy between the stomach and brain. Where the urine is turbid and high-colored, and the complexion sallow, the cause may be traced in many instances to an accumulation of bile in the duodenum or the blood, and a fit of vomiting will sometimes cause a large quantity to be ejected by the stomach.

Whatever the exact cause and nature of the headache may be, the nervous system has largely to do with it, inasmuch as some persons of the most irregular habits, with defective depurative organs, never have the sensation of a headache. I once knew a gentleman who was a martyr to gout, and had attacks which confined him to bed for six weeks at a time, and whose secretions were much deranged, as was shown by the dark bilious character of the evacuations, high-colored urine, and foul tongue; yet this patient, who freely indulged in the pleasures of the table, and drank largely of wine, never within his knowledge felt the sensation of headache. He was, however, one of the most nervously timid persons I ever met with, shunning the society of ordinary visitors, and at times he could not summon up sufficient courage to meet his oldest friends.

*Causes.*—The habit of continually taking aperient medicines by which the powers of digestion are enfeebled, indulgence in indigestible food and stimulating drinks, are common causes of this headache. A glass of beer, or a tablespoonful of brandy will bring it on at any time in those persons who are predisposed to it, and where the digestive organs are easily deranged. Suppers, if persons are not accustomed to them, will cause disturbed sleep, followed by



heat of the head, extreme nausea, and headache on awaking. Some of the worst forms of this headache have followed the excitement of evening parties, and the overloading of the stomach with indigestible food. Unwholesome food, which temporarily disturbs or arrests digestion, will occasion acute dyspepsia in some persons, and such persons are extremely prone to this form of headache; uneasiness at the stomach, faintness, depression of spirits, lassitude, and febrile excitement are to be reckoned among the prodromata. Then succeeds an oppressive frontal headache, with nausea and inability to face the light, or bear the slightest noise. In some persons vomiting ensues, and the patient finds immediate relief; and in others colicky pains and diarrhœa expel the irritating matters from the intestines, and the patient loses the headache more gradually; weight about the præcordia, dislike of food, high-colored urine, offensive evacuations, and a creamy fur on the tongue may remain for days after, during which the nervous system is more or less implicated, and confusion of ideas and vertigo, with a return of throbbing headache, follow any employment of the mind requiring thought and reflection. This headache may come on in a few hours after food, or the patient may go to bed comfortably, and either have disturbed and restless sleep, or wake up unrefreshed with a weight across the forehead, and forthwith the affection begins in earnest. A sense of cold and chilliness is felt about the scalp and face for a few hours, particularly if nothing is put into the stomach; but if such be the case, or as the day advances, the face becomes hot and flushed, and the patient is continually employed in applying cold wetted rags to the head for relief.

“The headache which appears in the course of the slightest attacks of this nature, often assumes a form with somewhat characteristic features, and which is familiarly known as the ‘*sick headache*.’ It is most common when acute exacerbations are superadded to the ordinary forms of atonic dyspepsia; and hence it is most liable to affect those who are out of health, and whose digestions are weakened by sedentary employment, and who have a tendency to costiveness. It occurs, however, also in persons of apparently vigorous health, sometimes without apparent cause, but most usually after some indiscretion in diet, or after some of the causes most likely to arrest the digestive process.”

*Treatment.*—In early life, when this headache is threatening, it can always be traced to some error in diet, and an emetic of sulphate of zinc or ipecacuanha brings relief in a couple of hours; or one grain of calomel, or three grains of blue pill taken on an empty stomach will mitigate the suffering in the head, though it may increase the nausea and loathing of food. With the advance of years these headaches become less acute, but more exhausting and tedious in their recovery. Rest in bed, cold applications to the head, and an alterative pill, followed by an alkaline purge in the morning, suffice for their cure.

When patients are very bilious, and the conjunctivæ yellow, a good cholagogue purgative will excite the action of the liver, and drain away a copious quantity of bile. A mixture of soda and bismuth with sal volatile will be useful to relieve flatulency and acidity. Where the bowels are irritable, a full dose of bismuth twice a day before meals is good. In the case of persons who are not strong, a few grains of carbonate of ammonia in water, or sal volatile, and chloric ether will sometimes arrest the symptoms at once.

If the headache is accompanied with atonic dyspepsia, and there is a clean tongue with weight and oppression at the epigastrium, the nitro-muriatic acid will be found serviceable before meals twice or three times a day. If flatulence is very troublesome, bismuth with nux vomica, and if there is constipation, a morning pill of aloes, nux vomica and belladonna, or one consisting of aloes, capsicum, quinine, and ipecacuanha are indicated. In some varieties of dyspeptic headache, Dr. Smith gives one minim of the tincture of nux vomica, every fifteen minutes for two or three hours, and he has found it most effectual. Where the extremities have been cold, and the pulse small and hard, a drop of tincture of aconite in a teaspoonful of water has fully answered my expectations in many instances. By dilating the vessels and favoring perspiration it has wonderfully relieved the aching brain. If the headache comes on soon after a meal from slowness of digestion, Dr. Smith gives half a drachm of saccharated pepsin in a wineglassful of sherry three times a day at meal-times. I have given Morson's pepsin wine with great advantage at meals, and it certainly accelerates digestion and relieves nausea and gastric oppression.

MINUTES  
—OF THE—  
TWENTY-SEVENTH ANNUAL MEETING  
—OF THE—  
MEDICAL SOCIETY OF NORTH CAROLINA.

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FIRST DAY—MORNING SESSION.

WILMINGTON, N. C., May 11th, 1880.

The Medical Society of the State of North Carolina met in this city at the Opera House at 11 o'clock this morning. Dr. J. F. Shaffner, of Salem, President, and Dr. L. Julien Picôt, Secretary.

The meeting was opened with prayer by Rev. C. M. Payne, M. D.

Dr. W. J. H. Bellamy delivered the address of welcome on the part of the citizens and of the New Hanover County Medical Association.

*Mr. President and Gentlemen of the Medical Society of the State of North Carolina:*

It is indeed a pleasant duty which has been assigned me by the New Hanover County Medical Association to greet you, and to extend to you a hearty welcome to the hospitality of the city of Wilmington. We esteem it a great honor you confer upon us, in holding this your Twenty-Seventh Annual Convention in our midst, and we assure you that no efforts will be spared, in providing for your comfort, your pleasure and your happiness. It has been just ten years since you met in annual session in this city, and many there were whose warm grasp of the hand then impressed us, whose cheery faces, genial smiles and familiar voices then encouraged us, who now lie in the silent tomb. In no decade in the history of our country have so many changes been wrought in our political, financial and social condition. Wars and rumors of wars in Europe, political dissensions and financial panics in America, one would think, had well-nigh distracted the public mind—but during this period a new impetus has been given to the arts and sciences, and

many new and valuable discoveries and inventions have been made. While more rapid strides may have been made in the sister sciences, medical science has had its votaries, whose labors of love and indefatigable effort have been crowned with success. And their legacies bequeathed to posterity for all time to come, will be monuments more lasting than brass—for as has been said and well expressed by a distinguished divine in our midst. ‘He who deserves a monument needs none to perpetuate his memory.’ You have come here as conservators of the public health, in the interest of science, and for the alleviation of human suffering—not merely for a brief respite from the daily round of professional toil, to rekindle social feelings, to renew old acquaintances or to strengthen the ties of friendship, but to join in the common work by which medicine is to become more perfect as an art, more exact as a science and more honorable as a profession. (Applause.) So then all join heads, hearts and hands together to the work before you, and when your labors are over, or a respite is afforded then I trust with propitious weather we may all enjoy together a ride upon the placid waters of the Cape Fear, a river, though not known in song as the ‘Swannanoa nymph of beauty,’ yet upon its shore, and on its bosom have transpired events, the history of which we all cherish and love to relate. (Applause.)

And now Mr. President and gentlemen, in conclusion, I again in the name of the profession and of the citizens of Wilmington extend to you a most cordial welcome.

Dr. W. C. Murphy moved that the Rev. C. M. Payne, M. D., be invited to a seat in the house during the session. Carried.

The Secretary, Dr. L. Julian Picöt, of Littleton, then called the roll of members, and the following were reported present :

Drs. N. J. Pittman, Tarborough ; S. S. Satchwell, Rocky Point ; H. W. Faison, Faison ; Alman Holmes, C. T. Murphy, Clinton ; Hugh Kelly, Statesville ; J. J. Summerell, Salisbury ; George A. Foote, Warrenton ; Eugene Grissom, Raleigh ; R. L. Payne, Lexington ; F. M. Rountree, Snow Hill ; J. F. Long, Washington ; Thomas F. Wood, Wilmington ; G. L. Kirby, Goldsborough ; J. F. Shaffoer, Salem ; R. I. Hicks, Williamsburg ; H. T. Bahnson, Salem ; W. W. Lane, W. J. Love, J. C. Walker, Wilmington ; Willis Alston, Littleton ; W. J. H. Bellamy, Wilmington ; W. T.

Ennett, Burgaw ; G. G. Thomas, Wilmington ; V. N. Sewell, Wallace ; John McDonald, Washington ; L. L. Staton, Tarborough ; A. G. Carr, Durham ; Jo. Graham, Charlotte ; W. H. Lilly, Concord ; T. J. Moore, Charlotte ; J. H. Barker, Tarborough ; T. D. Haigh, Fayetteville ; L. J. Picöt, Littleton ; W. C. Murphy, Magnolia ; C. W. Eagle, Sparta ; R. H. Speight, Tarborough ; C. E. Moore, Battleborough ; W. C. McDuffie, J. A. McRae, J. W. McNeill, Fayetteville ; R. H. Lewis, Raleigh ; J. D. Roberts, Magnolia ; H. M. Alford, Greensborough ; F. W. Potter, Wilmington ; J. F. Harrell, Whiteville ; W. P. Exum, Wayne county ; A. M. Lee, Clinton ; J. R. McClennon, Mooresville ; R. J. Nobles, Selma ; E. H. Hornaday, Willow Green ; I. W. Faison, Fulton ; W. H. Moore, Goldsborough ; Hubert Haywood, Raleigh ; O. P. Robinson, Fayetteville ; C. E. Bradshaw, Hurdle Mills ; A. D. McDonald, Wilmington ; S. B. Jones, Charlotte ; W. W. Gaither, Lenoir county.

The President appointed the following Committees :

#### CREDENTIALS.

Drs. J. J. Summerell, W. W. Lane, Alman Holmes.

#### FINANCE.

Drs. R. L. Payne, Geo. A. Foote, N. S. Henderson.

#### OBITUARIES.

Drs. Hugh Kelly, and J. F. Long.

Upon motion, the meeting adjourned until 3 o'clock this afternoon.

#### AFTERNOON SESSION.

The meeting was called to order at 3½ o'clock. Dr. W. W. Lane, on the part of the Committee on Credentials, reported that Drs. Ed. De La Rose King, H. S. Norcom, Thomas Hill and Jos. C. Shepard were entitled to membership without examination.

The Committee further recommended that the following newly examined physicians, having received their licenses, be admitted to the Society :

Drs. Richard Dillard, V. S. McNider, W. C. Galloway, K. J. Powers, J. M. Stansill, John T. Schonwald, R. H. Adams, L. W. Hunter, W. K. Anders, W. P. Mereer. Upon motion they were admitted to membership in the Society.



Dr. Long asked if the law requiring \$5.00 as the minimum fee for the examination of a candidate for insurance applied to the examination of candidates for a Mystic Order with a beneficiary or insurance feature. After much discussion the sense of the meeting was taken and it was decided that it did not apply to examination of candidates for such orders as the Knights of Honor.

Dr. J. C. Shepard, of Peñder, was received into membership of the Society.

Upon motion of Dr. McDuffie, 10 o'clock to-morrow was determined as the time for the delivery of the annual oration.

#### REPORT OF THE COMMITTEE ON FINANCE.

The Committee on Finance having examined the books of the Treasurer find that he has carefully and faithfully performed his duties, and respectfully beg leave to make the following report :

|   |          |
|---|----------|
| To amount of funds in Treasury at last session..... | \$229.15 |
| Received from all sources.....                      | 491.60   |

|             |        |
|-------------|--------|
| Total ..... | 720.75 |
|-------------|--------|

|   |        |
|---|--------|
| By amounts paid for Transactions and various other purposes ..... | 420.00 |
|---|--------|

|                                  |          |
|----------------------------------|----------|
| Leaving balance in Treasury..... | \$300.75 |
|----------------------------------|----------|

The Treasurer has now in his hands a list of delinquent members whose names he will announce and if their dues are not paid their names will be dropped from his books, and by the laws of the Society they will be virtually expelled.

We further recommend an annual assessment of two (2) dollars per capita.

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|------------------|--------------|
| R. L. PAYNE,     | } Committee. |
| GEO. A. FOOTE,   |              |
| N. S. HENDERSON, |              |

#### REPORT OF THE COMMITTEE ON THE ADOPTION OF THE METRIC SYSTEM OF WEIGHTS AND MEASUREMENT.

*To the Medical Society of the State of North Carolina :*

Your Committee appointed at the Greensborough meeting of this Society, May, 1879, to report upon the advisability of the adoption of the Metric System, make the following report :

In the consideration of this subject, the first point to be settled was, Is the metric system necessary to a more accurate means of weighing and measuring within the range of medical and pharmaceutical needs?

Our decision was in the negative.

1st. Because the substitution of this system would create confusion and errors, faults not inherent in the system itself, but by reason of our inability to enforce its uniform adoption in the medical or pharmaceutical professions.

2d. Because in our sparsely settled communities, the physicians are for the most part pharmacists as well, and that to learn to think in a new language of values would have but little favor among any considerable number of them.

3d. That to make the mandate of this Society in the affirmative of any avail, we would have to make way for it by a system of elementary preparation, both as to physicians and apothecaries.

4th. Our intercourse with countries using the metric system is very limited, and therefore, there seems to be no reason to desire to disturb the old way.

Nevertheless, we think that it is incumbent on medical men and apothecaries to be familiar with the metric system, that they may be able to read and write it with facility, both for the purposes of translation and for the rare occasions of compounding medicines written in metric terms.

The adoption of the metric system for the purpose of expressing values which are not in ordinary use, by those members who may contribute to our transactions, would be a mere affectation, and neither promotive of the establishment of this system, if desirable, nor a true expression of our own way of doing things.

|                   |              |
|-------------------|--------------|
| THOMAS F. WOOD,   | } Committee. |
| CHAS. J. O'HAGAN, |              |
| R. L. PAYNE,      |              |

The Chairman of above Committee then offered the following :

*Resolved*, That for the present it is not desirable or possible to establish the metric system among the medical or pharmaceutical professions in the State of North Carolina.

The Secretary read the resignation of Dr. R. K. Gregory, of Greensborough, and it was, on motion, accepted.

A letter of regret at not being able to attend the Convention, from Dr. P. E. Hines, of Raleigh, was read.

CONSTITUTION ALTERED MAKING A COMPLIANCE OF WITH LAW CREATING BOARD OF MEDICAL EXAMINERS A TEST OF MEMBERSHIP.

Dr. Satchwell introduced the following :

Whereas, It was the original intent, and is the spirit and meaning of the act incorporating this Society and establishing the State Board of Medical Examiners, that eligibility to membership should consist in holding a certificate of qualifications from said Board ; therefore,

*Resolved*, That in lieu of Section 2d, Art. 32d, of the Constitution, defining the eligibility to membership, the following shall be and is hereby substituted :

SEC. 2d. The permanent members of the Society shall consist of such regular physicians as shall have complied with the law of the State embraced in an "act to incorporate the Medical Society of the State of North Carolina, and for the establishment of a Medical Board of Examiners," and shall receive two thirds of the votes of those present.

Unanimously adopted.

RECOMMENDATION BY THE EDGECOMBE COUNTY MEDICAL ASSOCIATION FOR THE REGULATION OF THE PRACTICE OF MEDICINE.

Whereas, It seems expedient to the members of the Edgecombe County Medical Society that some legislation for the better regulation of the practice of medicine and surgery in the State of North Carolina is necessary, and,

Whereas, It seems the only proper channel through which the initiatory steps in such a direction should be taken is the State Medical Society, an Association composed of the leading medical men of the State, therefore, be it

*Resolved*, That the delegates from this Society to the Medical Society of the State of North Carolina be, and hereby are instructed to present to it at its next annual meeting which is to be held in Wilmington, May 11th, 1880, the following series of resolutions, viz :

*Resolved* 1st, That Section 2, of the act incorporating the State Medical Society should be amended by striking out the word "provided" and the following word "no" so that the law shall read, "and any person proven guilty of violating this law shall be deemed guilty of a misdemeanor, to be punished by a fine of \$50.00 or imprisonment for not more than three months."

2d. That a Board of Examiners for druggists should be appointed, in a manner to be decided upon, subject to the same regulations as the Board of Medical Examiners.

3d. That all the laws relating to physicians practicing without a license should be so amended as to include druggists.

4th. That certificates of death should be required in all cases where a physician was in attendance, from that physician; but where none attended, from some Justice of the Peace. These certificates to be presented to the County Superintendent of Health, who will give his permit for burial. It should be unlawful for an interment to be made without this permit.

5th. That the delegates from this Society are instructed to advocate the passage of these resolutions at the meeting of the State Society before mentioned, and furthermore, to ask the appointment of that Society of a committee who shall embody them, or such a modification as they may see fit to make, in a bill to be presented to the next session of the Legislature.

Signed,

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| JULIAN M. BAKER, | } Committee. |
| N. J. PITTMAN,   |              |
| J. W. JONES,     |              |

The whole subject was referred to a special committee as follows :

Drs. S. S. Satchwell, John McDonald, W. T. Ennett, Thomas J. Moore, and H. M. Alford.

Dr. Summerell, Chairman of the Committee on Credentials, reported the following gentlemen as duly accredited delegates to the Society :

Edgecombe County Medical Society—Drs. N. J. Pittman and J. H. Baker.

Rowan County Medical Society—Drs. Hill and McLellan.

New Hanover Medical Society—Drs. W. G. Thomas, H. S. Norcom and Edward King.

#### REPORT OF THE DELEGATE TO THE DECENNIAL REVISION OF THE U. S. PHARMACOPEIA.

Dr. Thomas F. Wood, delegate to the sixth decennial revision of the Pharmacopœia, reported that he represented the Medical Society in the Convention held in Washington, D. C.

The following gentlemen were nominated and elected as *Committee of Revision and Publication of the Pharmacopœia of the United States*.

Dr. Robert Amory, of Brookline, Mass. ; Dr. F. A. Castle, of New York ; Dr. D. L. Huntington, U. S. A. ; Dr. B. F. Gibbs, U. S. N. ; O. Oldberg, U. S. Marine Hospital Service ; P. W. Bedford, of New York ; C. Lewis Diehl, of Louisville, Ky. ; Louis Dohme, of Baltimore, Md. ; Thomas Doliber, of Boston ; Dr. Laurence Johnson, of New York ; Dr. J. F. Judge, of Cincinnati,

Ohio; John M. Maisch, of Philadelphia; G. F. H. Markoe, of Boston; H. H. Parsons, of Washington, D. C.; Dr. H. G. Piffard, of New York; J. P. Remington, of Philadelphia; Chas. Rice, of New York; Dr. W. S. W. Ruschenberger, of Philadelphia; Dr. E. R. Squibb, of Brooklyn; A. B. Taylor, of Philadelphia; W. S. Thompson, of Washington, D. C.; O. A. Wall, of St. Louis, Mo.; Dr. E. S. Wood, of Cambridge, Mass.; Dr. Thomas F. Wood, of North Carolina; and T. G. Wormley, of Philadelphia. Dr. Squibb declined to serve but promised all the assistance in his power to the Committee.

The Committee was empowered to fill its own vacancies, and also to employ skilled experts.

The items of the Nominating Committee's report read and adopted were those found in the report on the Revision of the United States Pharmacopœia, preliminary to the Convention of 1880, prepared and compiled by Charles Rice, Chairman of the Committee of the American Pharmaceutical Association, on the revision of the United States Pharmacopœia, with some amendments. They related to language, alphabetical arrangement, synonyms, cross references, description of crude drugs, description of chemicals, chemical formulæ, processes for chemicals, expressions of quantity, numerical relations of quantities, fluid extracts, temperature, definition of physical properties, specific gravity, definite expressions of weight, weight of finished product, and tables to be appended to the Pharmacopœia.

The following were added: That all doses be omitted from the Pharmacopœia, a table of saturations, and the Committee was empowered to add such other tables as might seem advisable.

A resolution that *parts by weight* be adopted in the formulæ of the Pharmacopœia was adopted.

Dr. Wood urged upon the members of the Society to give their aid to the Committee in this important work. The old Pharmacopœia was very little known by medical men and little used by pharmacists. This was because the work was not thoroughly up to the requirements of either profession. The new work is in the hands of some of the best working men in the pharmacal profession, but still it could not come to a final successful issue and be the companion volume of both professions, without the aid of every doctor pharmacists able to make suggestions as to improvement.



Dr. A. G. Carr read a paper on "Epithelioma of the Penis." Referred to the Committee on Publication.

Adjourned until 9 o'clock Wednesday morning, May 12th.

#### SECOND DAY—MORNING SESSION.

The Society was called to order promptly at 9 o'clock by the President, Dr. J. F. Shaffner.

The Chair announced the following Committee on Nominations :

Drs. N. J. Pittman, J. J. Summerell, Eugene Grissom, and H. T. Bahnson.

Dr. Summerell, Chairman of Committee on Credentials made a partial report, submitting the following named gentlemen as eligible to become members of the Society :

Dr. R. A. Hasser, Tobaccoville, N. C.

" L. M. Powers, Plymouth, N. C.

" C. M. Pool, Salisbury, N. C.

" H. P. Ivy, Fayetteville, N. C.

Drs. J. A. McRae, W. C. McDuffie, J. W. McNeill, delegates from the Cumberland County Medical Society, coming duly accredited, were admitted to seats.

Dr. Pittman reported a case of ainhum, exhibiting the specimen.

Dr. T. J. Moore, of Charlotte, read the regular annual essay on "Pelvic Cellulitis."

Upon the conclusion of the speaker, Dr. McDonald, of Washington, moved that the thanks of the Society be tendered to Dr. Moore, and spoke briefly, highly complimenting the effort.

Dr. C. J. O'Hagan, in seconding the resolution, warmly endorsed the essay as a highly creditable and an exhaustive resumé of the subject.

Dr. Foote, endorsed the favorable comments of the gentleman, and moved the reference of the essay to the Committee on Publication.

The Secretary announced that letters were received from Drs. Hadley, Allison and Lyon, regretting their inability to attend this meeting.

Dr. Lilly, of Concord, exhibited a specimen of calculus taken from the bladder of a hog, with a string as a nucleus, and reported a case of biliary calculus with specimen.

Dr. Foote reported a case of urinary calculus, and exhibited a stone discharged weighing two drachms.

Dr. Summerell knew of a case of removal of stone weighing an ounce and a quarter from the female bladder, by simple dilatation.

#### COOKING SODA FOR BURNS.

Dr. Foote spoke of the use of common cooking soda in burns. He had used it with good results.

Dr. Tate Murphy had used cooking soda with good effects in burns, but found that the soda would crust and cut in the flesh.

Dr. John McDonald thought that the most efficient way to use soda was in saturated solution, and that the employment of it in this way obviated the objection spoken of by Dr. Murphy.

Dr. Holmes spoke of carbolic acid in the treatment of burns.

Dr. Gaither's experience corroborated that of Dr. Holmes.

Dr. Summerell had equally good effects from the employment of spirits of turpentine and alcohol in burns, when other remedies were not to be had.

#### ULCER OF THE LEG.

Dr. Murphy had a case of ulcer of the leg which from its extent rendered amputation necessary. The only thing remarkable about the case was the length of time the ulcer lasted, and the quickness of recovery after amputation.

Dr. John McDonald spoke of amputation and the subsequent use of carbolic acid antiseptically.

Dr. Bellamy asked if in the case of chronic ulcer mentioned above that Martin's bandage had been tried. He had seen intractable ulcer cured by Martin's bandage when other means had failed. He had also seen Martin's bandage used in amputations almost without the loss of blood.

Dr. John McDonald spoke also of the use of Martin's bandage in amputation, in very difficult cases, and with good results.

Dr. F. W. Potter had had good effects in treating chronic ulcer of the leg by means of grafts and adhesive plaster.

#### GALL STONES.

Dr. Thomas Hill, of Salisbury, was much interested in the treatment of gall-stones. He had had an extended experience, and believed that chloroform taken internally would dissolve gall-stones.

He had come to regard chloroform as a specific in the treatment of biliary calculi.

Dr. G. G. Thomas, Chairman of Wilmington Committee of Arrangements, announced that tickets for the excursion complimentary to members of the Society, visiting physicians and their friends and families were ready for distribution.

On motion of Dr. W. W. Lane, the Society adjourned until 3 o'clock.

#### SECOND DAY—AFTERNOON SESSION.

The Society was called to order promptly at 3 o'clock, Dr. J. F. Shaffner, President, in the chair.

Dr. Lane, of the Local Committee of Arrangements, announced that there was no need for the gentlemen intending to go on the excursion to the forts to be apprehensive about the time of return. The Committee fixed the return of the steamer at a time sufficient for every one to connect with the Fayetteville steamers and the northern, southern and western bound trains.

Dr. Ennett introduced a resolution, the effect of which was to allow Dr. McL. Graham and other members whose membership had been forfeited by arrears to renew their membership by payment of dues.

A discussion ensued which traversed the whole ground of the action of the Society in suspending members for arrearage for a term of years.

The motion of Dr. O'Hagan to lay on the table, finally prevailed, upon the grounds that the Committee on Credentials, had ample means to estimate the circumstances in each case.

Dr. A. G. Carr, moved that the revised constitution be this year printed with the Transactions, that each member shall be furnished with a copy.

The Chair called for the reports of Sections.

Dr. W. C. McDuffie, Chairman of the Section on Surgery and Anatomy stated that he was unable to make a report, as he had been too busily engaged.

Dr. Wilson, Chairman of the Section on Obstetrics and Diseases of Women was absent, and consent was given for Dr. R. I. Hicks to read the report.

Dr. James McKee, Chairman of the Section on Practice of Medicine, and Dr. Tull on Pathology and Microscopy were both absent.

Dr. C. Tate Murphy had not completed his report, and was granted further time, and when complete to present his report to the Committee on Publication.

Dr. R. H. Lewis, Chairman of the Section on Ophthalmology and Otology submitted a comprehensive and interesting report, which was referred to the Committee on Publication.

Dr. Gaither offered the following resolution :

*Resolved*, That the committee appointed upon the Edgecombe resolution be instructed to consider and report in regard to the advisability of urging upon the profession and people what action we should take to procure a statutory lien for medical attendance. Adopted.

Dr. Wood, at the request of Dr. E. A. Anderson, read a letter from Dr. J. C. LeHardy of the Medical Association of Georgia, asking this Society to unite with them in the formation of a new United States Board of Health.

Dr. Wood moved that the subject be made the special order for to-morrow morning, immediately after the regular order of business. Adopted.

Dr. J. D. Roberts, of Magnolia, read a paper on hip-joint disease, exhibiting apparatus, and their application to a case under his treatment.

Dr. Henry W. Faison commented on the treatment of hip-joint disease, and this case in particular.

Dr. Picöt moved the reference of the paper to the Committee on Publication.

Dr. Holmes, from the Committee on Credentials, moved that Dr. L. Hussey be admitted to membership. Carried.

Society then adjourned to meet at 8 : 30 P. M., to hear the annual oration by Dr. Eugene Grissom, in the same building. (Opera House.)

A large audience of medical men, and ladies and gentlemen of the city greeted Dr. Grissom in the Opera House, to hear his address on "*Medica Science in Conflict with Materialism.*"

This address was subsequently referred to the Committee on Publication.

## THIRD DAY—MORNING SESSION.

The Society was called to order at 9 o'clock by Dr. W. C. McDuffie, of Fayetteville, Vice-President.

The Secretary announced that Dr. Shaffner, the President had been unexpectedly called home.

Dr. Summerell, Chairman of the Committee on Nominations, submitted the names of the following gentlemen as officers for the year 1880 :

For President :

Dr. Richard B. Haywood, Raleigh.

Vice-Presidents :

Dr. J. A. McRae, Fayetteville.

“ W. H. Lilly, Concord.

“ R. H. Speight, Tarborough.

“ W. J. H. Bellamy, Wilmington.

Treasurer :

Dr. A. G. Carr, Durham.

Secretary :

Dr. L. Julian Picöt, of Littleton.

Orator :

Dr. J. F. Long, Newbern.

## DELEGATES TO AMERICAN MEDICAL ASSOCIATION.

Dr. A. W. Knox, Raleigh.

“ Eugene Grissom, Raleigh.

“ Hubert Haywood, “

“ Thomas F. Wood, Wilmington.

“ G. G. Thomas, Wilmington.

“ J. F. Shaffner, Salem.

“ Jos. Graham, Charlotte.

“ T. D. Haigh, Fayetteville.

“ C. J. O'Hagan, Greenville.

“ J. H. Baker, Tarborough.

“ M. Whitehead, Salisbury.

## DELEGATES TO VIRGINIA MEDICAL SOCIETY.

Dr. R. L. Payne, Lexington.

“ H. M. Alford, Greensborough.



Dr. H. T. Bahnson, Salem.

“ J. W. Jones, Tarborough.

“ Preston Roan, Winston.

“ H. S. Norcom, Wilmington.

DELEGATE TO PUBLIC HEALTH ASSOCIATION.

Dr. Thomas F. Wood, Wilmington.

COMMITTEE TO APPOINT ESSAYIST.

Dr. L. L. Staton, Tarborough.

“ H. W. Faison, Faison.

“ R. L. Payne, Lexington.

COMMITTEE ON OBITUARIES.

Dr. E. Burke Haywood, Raleigh.

“ Peter E. Hines, Raleigh.

“ James McKee, Raleigh.

PUBLISHING COMMITTEE.

Dr. Thomas F. Wood, Wilmington.

“ Geo. Gillett Thomas, “

“ L. J. Picöt, Littleton.

“ C. J. O'Hagan, Greenville.

BOARD OF CENSORS.

Dr. N. J. Pittman, Tarborough.

“ Chas. J. O'Hagan, Greenville.

“ J. J. Summerell, Salisbury.

The Chair read the names of the following gentlemen as having been appointed by the President, Chairman of Sections :

*Surgery and Anatomy*—Dr. Allman Holmes.

*Obstetrics and Gynæcology*—Dr. Willis Alston.

*Practice of Medicine*—Dr. I. W. Faison.

*Materia Medica and Therapeutics*—Dr. W. C. Murphy.

*Microscopy and Pathology*—Dr. Hubert Haywood.

*Ophthalmology and Otology*—Dr. George Gillett Thomas.

Dr. W. C. Murphy, read an interesting paper on ancient medicine, and in conclusion stated it was but the result of a few hour's reading and not for publication.

Dr. McDonald, of Washington, moved to insert the following amendment after Section 3, Article 8 of the Constitution : “And

he shall not be reinstated to the rights and privileges of the Society unless by a two-third's vote of all the members present and full compliance with all the requirements of Section 2 of the same article. Adopted unanimously.

Dr. S. S. Satchwell, Chairman of the Committee on Obituaries, reported that since the last session of the Society the following gentlemen had died : Drs. Elmund Strudwick, Hillsborough ; W. W. Davis, A. E. Wright, J. Francis King, Wilmington ; and William Little, Raleigh.

Dr. A. W. Knox of Raleigh, from the Board of Censors, read the proceedings of the Guilford Medical Association in the case of Dr. R. W. Glenn, charged with violating the Code of Ethics.

Dr. Glenn had been guilty of conduct of sufficiently grave character to cause him to be expelled from the Association. The specifications were produced.

At a subsequent meeting of this County Association the former decision was repealed, and the whole case referred to the State Medical Society.

On motion of Dr. McDonald, of Washington, the case of Dr. R. W. Glenn, charged with irregular practice, was referred back to the Medical Association of Guilford county.

The consideration of the letter from the Georgia Medical Society made the special order for this time, was then begun.

Dr. Wood read the bill proposed by the Medical Society of Georgia for the creation of a new National Board of Health by Congress, but could not favor it.

Dr. Anderson read a paper on existing quarantine regulations for this State and port, and declared himself in favor of the non-interference of the general government in the matter, but desired its support for local officers and laws.

Dr. Wood offered the following :

Whereas, The National Board of Health has conducted the initial sanitary work entrusted to it with wisdom, giving proper direction to future inquiries and energizing the national movement by its vigorous example,

*Be it resolved*, That the Medical Society of North Carolina deems it unsound in policy to interfere with the work in the hands of such eminently competent men, because it would be unreasonable to expect anything approaching a perfect national system of sanitation in the short time the National Board of Health has been in exis-

tence ; and to substitute a new law for the old now, even if it had equal merit with it, would be to retard the work of sanitary progress, if it did not imperil the very existence of any law.

*Resolved*, 2d, That it is desirable to have a national system of quarantine, if possible, and that quarantine officers should be appointed from resident physicians of the port in which quarantine is established. That suitable buildings for quarantine service should be erected by the general government, and such other methods as will have for their object the carrying out of a system of uniform quarantine.

Resolution was laid on the table after a warm discussion.

REPORT OF THE COMMITTEE TO CONSIDER THE RESOLUTIONS OF THE  
EDGECOMBE COUNTY MEDICAL ASSOCIATION AS TO THE REGULA-  
TION OF THE PRACTICE OF MEDICINE AND PHARMACY.

*To the Medical Society of the State of North Carolina :*

The committee appointed to report upon the resolutions of the Edgecombe Medical Association, as laid before our State Society, beg leave respectfully to submit the following report :

We endorse the recommendation of the Edgecombe Association that, in order to the legal protection of the community from ignorant or incompetent druggists, a law should be passed by the Legislature requiring that all druggists dispensing medicines, and filling prescriptions of physicians, shall, as a requisite qualification for this responsible service, be required to obtain a license from our State Board of Medical Examiners. The cause of humanity demands the existence and enforcement of such a measure of protection to the health and lives of the people of any community in North Carolina.

In relation to the resolution of the Society that your committee should report upon the subject of asking from our next Legislature the enactment of a law giving to physicians what may be called a statutory lien for medicines furnished and medical attendance rendered, we have considered that duty also.

Your committee are of the opinion that if the laborer and mechanic are entitled to such lien, if the landlord is entitled to such upon the crops of his tenant, if the merchant is entitled to such lien upon the farmer or produce, for supplies and advances furnished, then the medicines, brains, and professional services of the physician furnished to his patient, are entitled to an efficient protective lien upon the property of such patient. The interest of the

patient, his health and life, would be better protected and advanced by such a wise and judicious statutory lien in behalf of his physician. In the great work of medical improvement and reform in our State, and of sanitary progress, now imposing new responsibilities and higher duties upon this Society and the medical profession of the State, we cannot turn a deaf ear to the claims of the physician, to the support of his family and the education of his children. In the proverbial unwillingness of a large portion of our patients to pay the physician even when able to do so, the importance and necessity of such a statutory lien, are too self-evident to require demonstration. The well-known poverty of a large portion of the medical profession of our State, and their consequent inability to do justice to themselves, their families, and to the claims of their profession, is owing very materially to their inability to collect just and reasonable bills. Remove these difficulties by such a statutory lien as will work no wrong or injustice to the patient, and it will be better for that patient as well as the physician.

Your committee, therefore, recommend the appointment, by the President, of a Committee of five members of this Society, whose duty it shall be to present to the next Legislature a memorial and bill contemplating the enactment of such law or laws as may best meet and secure the ends, aims and objects contemplated.

Respectfully submitted,

|                  |              |
|------------------|--------------|
| S. S. SATCHWELL, | } Committee. |
| W. T. ENNETT,    |              |
| T. J. MOORE,     |              |
| JOHN McDONALD,   |              |

The following committee was appointed by the President to carry out the purposes of the foregoing report :

Drs. S. S. Satchwell. John McDonald, Joseph H. Baker, R. H. Lewis, and G. A. Foote.

The Society then adjourned to meet at 3 o'clock.

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#### AFTERNOON SESSION.

Dr. R. F. Lewis, second Vice-President, in the Chair.

Drs. J. F. Harrell read a report of a difficult obstetrical case and its treatment.

Dr. E. Porter addressed the Society on the use of cotton lint in the treatment of incised and lacerated wounds, instancing several cases from his practice in which its application as a dressing was attended with the most satisfactory results.

Dr. R. I. Hicks presented the regular report on the "Progress of Gynæcology" by Dr. Wm. R. Wilson. Referred to the Committee on Publication.

The newly elected President, Dr. Haywood, of Raleigh, was then inducted into office by Drs. Knox and McRae. On taking his seat Dr. Haywood said: "I thank you, gentlemen, for this manifestation of your kindness in electing me to preside over your deliberations. It is an honor to which I have never aspired and in its bestowal was as unexpected as it was undeserved. At this date, when we have so large a number of intelligent physicians present, it is an honor well calculated to flatter the vanity of any ordinary man; more especially is it so to me who have witnessed the disadvantages under which your Society labored at its inception, and the struggles it underwent for many years to maintain its existence.

"A few physicians assembled at your Capital in 1849 to form a Medical Society for the State. Amongst the number, I remember Drs. Edmund Strudwick, of Orange; James E. Williamson, of Caswell; James A. McRae, of Fayetteville; Frederick J. Hill, of Brunswick; William George Thomas, of Wilmington; N. J. Pittman, of Edgecombe; Thomas N. Cameron, of Fayetteville; and Charles E. Johnson, William G. Hill, and William H. McKee, of Raleigh.

"Dr. Strudwick (whose accidental death we have been so recently called on to deplore) moved that Dr. Frederick J. Hill, of Brunswick, be called to the chair. On motion of Dr. Strudwick, the sense of the meeting was taken on the formation of a State Medical Society and decided in the affirmative. When the time for the election of officers arrived, Dr. Frederick J. Hill said that he was not an active member of the profession, having retired many years before on account of age and infirmities, and asked, as a favor to him, that he be not placed in nomination. He suggested the name of Dr. Edmund Strudwick, of Orange, as permanent President. Dr. Strudwick was unanimously elected, and Dr. Hill, on retiring from the chair, was unanimously elected the first honorary



member of this Society. An address to the physicians of the State was prepared and ordered to be published by a committee composed of Drs. Johnston B. Jones, McKee, Pittman, McRae and R. B. Haywood.

“The expectations for a large attendance in 1850 were very great, but destined to bitter disappointment. On calling the roll but six members answered to their names. The Vice-President, Dr. Williamson; the Secretary, Dr. W. H. McKee; the Treasurer, Dr. William G. Hill, and *three* members—Drs. Thomas N. Cameron, Pittman and R. B. Haywood. Drs. Strudwick and Thomas arrived a short time after, making eight. The propriety of disbanding was again discussed and it was resolved to ‘hold the fort.’ Johnson and Cameron wavered; Strudwick, Thomas and Pittman stood firm, and with what success *you* gentlemen are best qualified to judge. Then we had eight, to-day we have more than *two hundred and eight*.

“Agamemnon said that if he had ten such Generals as Nestor the walls of Troy would soon be in ashes. Strudwick, our Agamemnon, is gone, but I am glad to see among the living to-day our three Nestors—Thomas, Pittman and McRae; they have been ‘faithful to the end.’

“In conclusion, gentlemen, I have only to say that I accept the position to which your partiality has assigned me, and will endeavor to perform the duties to the best of my ability.”

Dr. Wood, Secretary of the North Carolina Board of Health read an outline of the work done the first year of organization of that body.

#### REPORT OF THE SECRETARY OF THE NORTH CAROLINA BOARD OF HEALTH FOR THE YEAR ENDING APRIL, 1880.

*To the President and Members of the North Carolina Board of Health :*

GENTLEMEN :—In accordance with the following resolution passed at our meeting of organization, I have the honor to report to you in outline the work undertaken by your Secretary.

“*Resolved*, That the execution of the Board of Health Law be entrusted to the Secretary,—the details of its provision being under his management,—and that the Secretary make his report to the next meeting of the Board.”

The objects attempted to be attained have been

*First*, The organization of a method to secure the registration of vital statistics.

*Second*, Inculcation of elementary sanitary principles among the people.

The science of vital statistics is in its infancy in this country. Notwithstanding the fact that practical sanitarians have found it to be essential, to a successful prosecution of their work, very few sanitary officers have succeeded in developing such an organization as to meet their requirements.

The difficulties lying at the very threshold of such an organization are easy to comprehend, but difficult to overcome. In every large community such as a State, we find, a very large diversity of interests. In such a large territory, voluntary returns of statistics are not to be relied on. Even if the reporter be ever so much convinced of the good he is rendering, the demands upon his time for the regular business of his life by which his support is attained, would warrant him in letting this unpaid work go undone, whenever there was any conflict. And then, too, reporting of the voluntary sort would necessarily be of the most elementary character, and as above intimated, fitful.

Another difficulty, and the most important one, perhaps, is a lack of conviction on the part of the great body of medical men, as to the necessity of the work; and the lack of conviction comes from the lack of a proper knowledge of the development of Statistical Science. This state of things can only be overcome by the slow and troublesome course of the dissemination of sanitary education.

The experience I have gained for the few months I have had this matter in hand is far from gratifying. In fact it has been sometimes painful, and at other times quite trying to the patience. It was not expected that a system of vital statistics was going to grow at the will of the statisticians, but no little dependence was placed in the zeal of the members of the Medical Society, as promoters of a work that the body to which they belong had repeatedly sanctioned and favored. From this source there has been an abundance of apathy, indifference, prejudice and opposition.

Forty-eight counties out of the ninety-four have organized, but few of them have attained the standard set forth in the law. Some of the most populous counties have not been willing to undertake

an organization, upon the ground that the law was imperfect, exacting work and imposing responsibilities without adequate compensation. Other counties have overcome these obstacles, and have done pioneer work of organization, with sufficient zeal and determination to win the approbation and confidence of the community, securing for the Superintendent of Health fair compensation. The effect of such example if the number were sufficiently multiplied, will be to establish foci of influence in the general State work, that will secure a permanent foothold for future progress.

It is useless for this Board to expect the best results without the aid of vital statistics. The range of matter desirable would include

1st. Births.

2d. Marriages.

3d. Deaths.

4th. Number of persons falling sick.

The *first* item has never been a matter of legal registration. The *second* item is quite correctly registered under the imperative law attaching a penalty for non-conformance.

The registration of deaths is faithfully kept in Wilmington, Newberne and Raleigh, death certificates being required before permits for burial are issued.

The registration of cases of sickness, has been imperfectly done in many counties under the direction of the State Board of Health.

#### THE IMPORTANCE OF REGISTRATION

cannot be too earnestly dwelt upon. It is of advantage to the material interests of the State in respect to the influx of emigrants to settle upon our unoccupied lands.

It is no use for our Agricultural Department to send out circulars to invite settlers, without they can send some official statement as to the health of the different sections. To say in general terms that a region is "healthy," will not satisfy a foreigner, especially from any of the European nations, as they are used to official bulletins, giving accurate statements.

It is of no use to attempt to institute sanitary remedies until we know what the needs of the case are. We must record cases of sickness, and deaths that we may study the virulency of the diseases, and work out the prevention. We must know what the ratio of deaths to the births, that we may know whether we are advancing

or retrograding in our civilization. In short, sanitary science, the science of prevention, is one of the demands of our advancing civilization, and we dare not evade its influences, and expect to keep pace with other States who are joined in the same race for superiority. But this end cannot be attained by speech-making, or learned essays, or loud self-glorification ; it must come from the quiet organized drudgery of observing and recording. And this organization can have no life, except there is money sufficient to pay the registrars for their difficult work.

I will now speak of the system devised for this purpose, taking one county as an example.

After the organization of a County Board, printed and written instructions were issued to the Superintendent of Health who is the county executive office of health, and registrar of vital statistics.

He distributed to every doctor memorandum books with printed lists of diseases. He sent out also death returns blanks to individual physicians.

All that was necessary for the physician to do was to make a memorandum of his diseases and deaths and send them monthly to the Superintendent of Health. The Superintendent is by law required to make returns to the Secretary's office by the 10th of the month for the month preceding it, or be liable to a fine of \$1 a day for every day of delinquency. Notwithstanding this penalty, and notwithstanding the ease with which this work could have been done, not a County in the State is entitled to the credit of having done the work required.

I then found it necessary to change somewhat the method, and issued a new form of enquiry. It was necessary to exclude vital statistics from this form, and it was only then that I had any success. The material then collected by the Superintendents was of more value and sufficiently important to embody in a Bulletin, somewhat after a plan foreshadowed by a committee appointed by the State Medical Society at the Warrenton meeting. I am not at all satisfied with what we were doing, but I wanted to make a beginning, however humble, hoping by the experience gained to go on to more important work.

From sanitarians in other States I have had some encouraging commendations. From sanitarians in the State, from every doctor in the State, I have to still plead for support and aid.

If you will run your eye down the Bulletin under "Remarks," you will see for yourself where our failure lies. It would seem that the members of this Society had forgotten that the Board of Health was their creature. It would seem that all the oratory that has been expended in the past, calling upon the Legislature, calling upon the citizens, calling upon the doctors for help and encouragement meant nothing. For when the opportunity comes, and a little work is demanded—a *very little work*—we see an exhibition of the most unwarrantable indifference. Gentlemen, treat this work just as though it were the enterprize of a few individuals, started for their own aggrandizement; whereas, the truth must be bluntly told that the Medical Society has chosen from their number persons they considered fittest for the work; with a full knowledge of the fact that the Secretary was doing the work at his own private expense, barring the mean pittance of \$200 from the State, gentlemen of this Society have stood by with indifference and have seen the burden fall with great weight upon one person, without even putting their pen to paper to give what might have been the all-desired aid.

The actual sanitary work done, has been confined to the inculcation of elementary sanitary principles among the people.

The first step taken towards the accomplishment of this end was to call the attention of the public to their dwellings, food and water.

As the analysis of water was needed to convince the unsuspecting of the condition of their sources of water supply, I called attention to the provision made by the State for these analyses. Very many families all over the State have availed themselves of this opportunity, and the results have served to teach the importance of examining, critically, articles of daily consumption.

The analyses showed in a great majority of cases that well-water was impure, and with this important item as a starting point, enquiry as to other sanitary matters has followed. A tabular statement of analyses by towns will be presented in the report of your Secretary to the next Legislature, through the Governor.

The work of analysis is temporarily suspended by reason of the vacancy in the office of Chemist at the Agricultural Experiment Station. It is hoped the work will soon be taken up again.



## UNIFORMITY OF POST-MORTEM EXAMINATIONS.

In order that there should be uniform post-mortem examinations by Superintendents of Health, who by the law are entrusted with such examinations for coroner's inquests, a pamphlet was prepared by your Secretary, being founded on the German Regulations for 1877, with changes and additions. This work has been put in the hands of Superintendents in every county, and is the standard required by the rule of the Board.

Superintendents of Health labor under great disadvantages in these examinations for coroner's inquests. Experience has convinced the Board that coroner's inquests as usually performed are entirely valueless in a medico-legal point, and are far more expensive than is necessary.

By far the greater number of inquests are perfunctory performances in which the coroner puts the verdict in the mouth of the willing foreman. It is not insinuated that this verdict is necessarily incorrect, but a verdict so palpably plain as many of them does not require the expensive intervention of a coroner's jury to determine, and could therefore be dispensed with entirely.

These inquests to have any value should be under the control of a medical expert, and it seems to the Board that this duty could be entrusted with perfect safety to the Superintendent of Health. If after examination into the particulars, either alone, or after consultation with the County Board of Health it is deemed advisable, then an inquest should be proceeded with. As it now stands the Inquest Law is a farce.

For example !

A man is seen by many by-standers to fall accidentally into the river. His body is recovered after a few days. It is identified. A coroner's jury is called at an expense to the county of at least twenty dollars. The perfunctory proceeding is soon ended, and the jury wisely comes to the conclusion that it was accidental drowning. Numerous cases are occurring monthly in the larger towns, which show the utter incompetency of the present law. As the matter now stands the coroner by advice of the jury has to determine whether a medico-legal inspection is necessary.

## DISINFECTION, DRAINAGE, DRINKING WATER AND DISINFECTANTS.

A pamphlet was issued in June, 1879, giving plain instruction on

the more important matters under these topics. The success of the pamphlet was so great that a large edition was exhausted.

Professor Wm. Cain, Civil Engineer, and member of the Board was requested to continue the subject which he did in a pamphlet of thirty pages.

#### LIMITATION AND PREVENTION OF DIPHTHERIA.

At the request of your Secretary, Dr. R. L. Payne, of Lexington, member of the Board, contributed an essay on the *Limitation and Prevention of Diphtheria*. This was deemed urgently necessary as this scourge was prevalent in many counties, causing in some instances panics in whole communities. A large edition of this pamphlet was exhausted within a month after its issue.

In the meantime Professor William Cain's pamphlet on

#### SANITARY ENGINEERING

was exhausted and applications were coming in daily for it. At my request, Mr. Cain kindly consented to re-write the essay, and a second edition enlarged to 90 pages was issued. In all parts of the State, these pamphlets on elementary sanitary subjects were well received, and we believe the teaching inculcated will bring very many of our people to consider the necessity of a general sanitary movement.

#### A YEARLY COLLECTION OF STATISTICS.

We must not let an opportunity pass to glean the crop of vital statistics, and having this item in view your Secretary recommends that we attempt to have a law covering the following points enacted by the next Legislature.

Every citizen listing his taxes shall give the following items on the same blank furnished for his tax-list :

1. Number of marriages in the family since last assessment.
2.     "     "   births     "     "     "     "     "     "
3.     "     "   deaths     "     "     "     "     "     "

This can be easily done, and although there are many chances of error, it is better than anything we have yet devised.

It is, furthermore, desirable that material changes be made in our law, and your Secretary suggests that a committee from the Board attend the next Legislature and ask that the needed changes be made.

The compensation of the County Superintendent of Health should be the usual rates allowed to physicians in the several counties according to the prevailing custom, and at the discretion of the Board of County Commissioners.

All these items can be arranged on the spot more satisfactorily, as soon as the temper of the Legislature be ascertained.

I have laid before this body an outline of the work of the North Carolina Board of Health, by the request of the Board, recognizing as we do that as an auxiliary body, created by you and responsible to you, to show how great a work we have before us, and how much we need the help of every doctor, and the the undivided support of the Medical Society of North Carolina.

Respectfully submitted,

THOMAS F. WOOD,

Secretary N. C. Board of Health.

#### RESOLUTIONS ENDORSING THE NORTH CAROLINA BOARD OF HEALTH.

WHEREAS, The General Assembly of the State of North Carolina at its last regular session passed a bill entitled an act supplemental to an act creating the State Board of Health.

*Resolved*, That the Medical Society of the State of North Carolina, in convention assembled, cheerfully endorse the objects contemplated in said bill, and regard it as a wise and patriotic scheme for the public good, wholly consistent with the wants of our advancing civilization, and that in enacting this law, our law-makers were possessed of genuine patriotism, and an honest effort by protecting the public health, and the publication of our health bulletins abroad, to invite immigration to and build up the material interests of the State.

*Resolved*, That the opinion of the State Medical Society unites with that of the President and Secretary of the State Board of Health whose positions have enabled them to witness its workings, that the present law liberal in its provisions for the care of our sick in jails, and poor houses, for the prevention of epidemics, and the invasion of diseases dangerous to the public health, is still imperfect and would be more efficient and operative if properly amended.

*Resolved*, That the Secretary of this Society be instructed to furnish the President of the State Board of Health with a copy of these resolutions with the permission of using this endorsement in his next annual report to the Governor.

After an animated discussion as to the place of meeting, Asheville was selected, and the last Tuesday in May as the time.

## BOARD OF EXAMINERS.

Dr. Haigh announced that Dr. Robert I. Hicks having removed to Virginia, had tendered his resignation as a member of the Board of Examiners and that Dr. Richard H. Lewis, of Raleigh, had been elected in his place.

Dr. John McDonald, of Washington, was announced as essayist.

Dr. C. Tate Murphy offered a resolution thanking Dr. Grissom for the able address delivered by him, and requesting a copy for publication. Carried.

Dr. John McDonald offered a resolution of thanks to the citizens of Wilmington for their generous hospitality. Carried.

Dr. L. J. Picöt offered a resolution of thanks to the railroads for their liberality in passing delegates for half fare.

Society adjourned to meet in Asheville on the last Tuesday in May, 1881.

J. F. SHAFFNER, M. D., President.

L. JULIEN PICÖT, M. D., Secretary.

The following is a complete list of

## NEW MEMBERS FOR 1880—RECAPITULATION.

|  |  |
|--|--|
| Dr. Richard Dillard, Jr., Edenton.     | Dr. S. J. Montague, Winston.             |
| " V. St. Clair McNider, Jackson.       | " J. L. Nicholson, Richlands, Onslow co. |
| " L. M. Powers, Plymouth.              | " John Whitehead, Salisbury.             |
| " W. C. Galloway, Snow Hill, Green Co. | " T. W. Harris, Chapel Hill.             |
| " K. J. Powers, Camera, Pender County. | " H. T. Ivy, Fayetteville.               |
| " J. McQ. Stansill, Rockingham.        | " A. B. Huntley, Wadesborough.           |
| " J. T. Schonwald, Wilmington.         | " D. B. Frontis, Lexington.              |
| " R. H. Adams, Gastonia.               | " J. A. Collins, Enfield.                |
| " L. W. Hunter, Charlotte.             | " C. M. Pool, Salisbury.                 |
| " W. K. Anders, Gravel Hill.           | " John Irwin, Villa Franca.              |
| " N. B. Herring, Toisnot.              | " G. H. West, Newton.                    |
| " M. W. Hill, Statesville.             | " G. E. Matthews, Ringwood.              |
| " E. T. Speed, Tarborough.             | " T. S. Burbank, Wilmington.             |
| " L. Hussey, Warsaw.                   | " Thomas Hill, Salisbury.                |
| " W. P. Mercer, Toisnot.               | " J. C. Shepard, Scott's Hill.           |
| " H. S. Norcom, Wilmington.            | " R. A. Hanser, Tobaccoville.            |
| " Ed. De La Rose King, Wilmington.     |  |

## REVISED ROLL

*Of Members in the Order in which they Signed the Constitution.*

Those marked \* were present at last meeting. Marked (D) denotes deceased.

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Dr. E. Strudwick, (D) Hillsborough.  
 " N. J. Pittman,\* Raleigh.  
 " J. B. Jones, Charlotte.  
 " R. B. Haywood,\* Raleigh.  
 " Jas. A. McRae,\* Fayetteville.  
 " Jas. B. Dunn, Raleigh.  
 " Will. Geo. Thomas,\* Wilmington.  
 " S. S. Satchwell,\* Rocky Point.  
 " J. R. Mercer, Tarborough.  
 " E. B. Haywood, Raleigh.  
 " Jas. P. Bryan, Kinston.  
 " A. B. Pierce, Halifax.  
 " H. W. Faison,\* Faison's Depot.  
 " Allman Holmes,\* Clinton.  
 " E. A. Anderson,\* Wilmington.  
 " C. T. Murphy,\* Clinton.  
 " Hugh Kelly,\* Statesville.  
 " F. M. Henderson,\* Concord.  
 " J. J. Summerell,\* Salisbury.  
 " P. E. Hines, Raleigh.  
 " M. Whitehead, Salisbury.  
 " J. G. Ramsay, Rowan Mills.  
 " R. H. Winborne, Edenton.  
 " J. K. Hall, Greensborough.  
 " Geo. A. Foote,\* Warrenton.  
 " Eugene Grissom,\* Raleigh.  
 " R. L. Payne,\* Lexington.  
 " F. M. Rountree,\* Snow Hill.  
 " W. A. Collett, Morganton.  
 " E. F. Ashe, Wadesborough.  
 " D. B. Woods, Rowan Mills.  
 " Charles J. O'Hagan,\* Greenville.  
 " W. A. B. Norcom, Edenton.  
 " J. F. King, (D) Wilmington.  
 " J. W. Jones, Tarborough.  
 " J. F. Long,\* Washington.  
 " John K. Ruffin, Wilson.  
 " C. W. Knight, Tarborough.  
 " J. B. Hughes, New Berne.  
 " W. W. Gaither,\* Lenoir.  
 " J. C. Gidney, Shelby.  
 " William Little, (D) Raleigh.  
 " Wm. R. Wood, Scotland Neck.  
 " J. H. Hicks, Faison.  
 " M. T. Savage, Scotland Neck.  
 " Thomas F. Wood,\* Wilmington.  
 " Thomas C. Powell, Rocky Mount.  
 " Franklin Hart, Tarborough.  
 " Geo. L. Kirby,\* Goldsborough.  
 " L. A. Stith, Wilson.  
 " J. F. Shaffner,\* Salem.  
 " W. T. Cheatham, Henderson.  
 " Robert I. Hicks, Williamsborough.  
 " Elisha Porter,\* Rocky Point.  
 " Walter Debnam, Earpsborough.  
 " F. J. Haywood, Raleigh.  
 " C. R. Barron, Toisnot.  
 " B. P. Alston, Warrenton.  
 " G. G. Smith, Concord.  
 " D. N. Patterson, Mangum.  
 " Joel G. King, Warrenton.  
 " J. B. Sugg, Tarborough.  
 " H. T. Bahnsen,\* Salem.  
 " Geo. N. Ennett, Saunders' Store.  
 " Chas. Duffy, Jr., Newbern.  
 " W. W. Lane,\* Wilmington.  
 " R. L. Cowan, Rowan Mills.

Dr. R. F. Lewis,\* Lumberton.  
 " James S. Robinson, Elizabeth.  
 " W. J. Love,\* Wilmington.  
 " J. C. Walker,\* Wilmington.  
 " James McKee, Raleigh.  
 " L. L. Alexander, New Hanover Co.  
 " Willis Alston,\* Littleton.  
 " W. J. H. Bellamy,\* Wilmington.  
 " Geo. F. Lucas, Point Caswell.  
 " Walter Brodie, Whittaker's.  
 " A. S. Jones, Warrenton.  
 " H. Otis Hyatt, Kinston.  
 " J. L. Knight, Tarborough.  
 " C. S. Killebrew, Tarborough.  
 " W. T. Ennett,\* Rocky Point.  
 " D. McL. Graham,\* Wallace.  
 " W. I. Royster, Raleigh.  
 " G. Gillett Thomas,\* Wilmington.  
 " V. N. Seawell,\* Wallace.  
 " Geo. S. Attmore, Newbern.  
 " S. B. Flowers, Mt. Olive.  
 " P. W. Young, Oxford.  
 " John McDonald,\* Washington.  
 " Francis Duffy, Newbern.  
 " L. L. Staton,\* Tarborough.  
 " T. B. Germon, Ridgeway.  
 " A. G. Carr,\* Durham.  
 " John A. Allison, Statesville.  
 " J. B. Gaither, Salisbury.  
 " J. M. Hadley, La Grange.  
 " W. G. Johnson, Farmington.  
 " W. J. McInden, Wadesborough.  
 " Josh. W. Vick, Selma.  
 " Isaac C. Green, Warrenton.  
 " P. L. Murphy, Wilmington.  
 " Joseph Graham,\* Charlotte.  
 " J. M. Miller, Charlotte.  
 " J. L. Henderson, Mt. Pleasant.  
 " J. R. Wilson, Harris' Depot.  
 " J. S. Blair, Harris' Depot.  
 " J. F. Miller, Goldsborough.  
 " S. J. Alexander, Randsalburg.  
 " H. K. DeArmand, Pineville.  
 " J. P. McCombs, Charlotte.  
 " O. P. Houston, Mt. Ulla.  
 " S. J. Gilmer, Concord.  
 " John Fink, Concord.  
 " W. H. Lilly,\* Concord.  
 " Thomas J. Moore,\* Charlotte.  
 " E. S. Foster, Louisburg.  
 " A. A. Hill, Lexington.  
 " J. H. Baker,\* Tarborough.  
 " J. B. Hall, Scotland Neck.  
 " J. M. Richardson, Lincolnton.  
 " T. D. Haigh,\* Fayetteville.  
 " Alex. Montague.  
 " L. J. Picôt,\* Littleton.  
 " David N. Sills, Castalia.  
 " John A. Drake, Battleborough.  
 " W. C. Murphy,\* South Washington.  
 " W. J. Cooke,\* Louisburg.  
 " E. J. Thorpe, Rocky Mount.  
 " Joshua Taylor, Williamston.  
 " D. W. Bullock, Tarborough.  
 " W. H. Whitehead, Battleborough.  
 " C. W. Eagles,\* Sparta.  
 " R. A. Sills, Nashville.



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|------------------------------------|-------------------------------------|
| Dr. R. H. Speight,* Tarborough.    | Dr. E. H. Hornaday,* Willow Green.  |
| " C. E. Moore,* Battleborough.     | " Paul B. Barringer, Dallas.        |
| " H. G. Land, Poplar Branch.       | " I. Wellington Faison,* Fulton.    |
| " R. J. Grimes, Robersonville.     | " John A. Pollock, Kinston.         |
| " W. C. McDuffie,* Fayetteville.   | " A. W. Knox,* Raleigh.             |
| " B. W. Robinson, Fayetteville.    | " W. H. Moore,* Goldsborough.       |
| " P. S. Peteway, Enfield.          | " John W. Smith, Reidsville.        |
| " Henry Tull, Kinston.             | " C. C. Peacock, Wilson.            |
| " A. V. Budd, Egypt.               | " D. A. Cheek, Greensborough.       |
| " R. R. Robeson, Kyles' Landing.   | " J. A. McLean, McLeansville.       |
| " M. J. DeRosset, New York City.   | " J. G. Ector, Friendship.          |
| " W. A. Murdock, Mt. Ulla.         | " Hubert Haywood,* Raleigh.         |
| " James W. McNeill,* Fayetteville. | " James M. Covington,* Rockingham.  |
| " J. D. McMillan, Lumberton.       | " Henry W. Lee, Raleigh.            |
| " W. H. McKinnon, Fayetteville.    | " W. R. Hollingsworth, Mt. Airy.    |
| " Jos. Hollingsworth, Mt. Airy.    | " O. P. Robinson,* Fayetteville.    |
| " Robert W. Glenn, Greensborough.  | " C. E. Bradsher,* Hurdle's Mills.  |
| " Beverly Jones,* Forsythe County. | " B. W. Thomas, Thomasville.        |
| " Adam E. Wright, (D) Wilmington.  | " S. W. Stevenson, Mooresville.     |
| " Nat. S. Henderson, Pelham.       | " H. T. Trantham, Salisbury.        |
| " Jeff. Seales, Reidsville.        | " W. P. Beall, Greensborough.       |
| " Geo. W. Long, Graham.            | " Wm. A. Coble, Brick Church.       |
| " Richard H. Lewis,* Raleigh.      | " A. D. McDonald,* Wilmington.      |
| " Geo. W. Graham, Raleigh.         | " S. B. Jones,* Charlotte.          |
| " Preston Roan, Winston.           | " Charles M. Glenn, Greensborough.  |
| " J. D. Robests,* Magnolia.        | " Joseph J. Cox, New Garden.        |
| " L. H. Hill,* Germantown.         | " D. M. Prince, Laurel Hill.        |
| " W. W. Wilhelm, Mooresville.      | " J. A. Sexton, Raleigh.            |
| " W. R. Wilson, Townesville.       | " S. B. Evans, Statesville.         |
| " E. Nelson Booker, Clayton.       | " N. Mc. Johnston, Durham.          |
| " N. S. Siewers, Salem.            | " J. T. Sledge, Middleburg.         |
| " L. G. Hunt, Huntsville.          | " R. H. Hargrave, Robersonville.    |
| " Jas. E. Griffith, Clemmonsville. | " J. T. Winston, Youngsville.       |
| " W. P. Mallett,* Chapel Hill.     | " H. P. Burgin, Marion.             |
| " H. M. Alford,* Greensborough.    | " C. A. Swindell, Greenville.       |
| " F. W. Potter,* Smithville.       | " W. L. Abernethy, Hickory.         |
| " J. F. Harrell,* Whiteville.      | " John Chapel Walton, ———.          |
| " W. P. Exum,* Wayne County.       | " J. M. Tomlinson, Bush Hill.       |
| " D. Stuart Lyon, Charlotte.       | " Julian M. Baker, Tarborough.      |
| " A. M. Lee,* Clinton.             | " T. Eugene Balsley, Greensborough. |
| " J. R. McLeiland, Mooresville.    | " B. G. Harris, High Point.         |
| " Peter McLean, Shoe Heel.         | " A. D. Lindsay, Kernersville.      |
| " Richard J. Noble,* Selma.        | " J. L. Gunn, Yanceyville.          |
| " Wm. H. H. Cobb,* Goldsborough.   | " Thomas E. Anderson, Statesville.  |
| " J. H. Tucker, Henderson.         | " C. S. Battle, Rocky Mount.        |
| " C. G. Bryant, Rich Square.       |                                     |

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#### HOMORARY MEMBERS.

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|----------------------------------|--|
| Dr. W. T. Howard, Baltimore, Md. | Dr. F. D. Lente, Cold Springs, N. Y.   |
| " Oris F. Manson, Richmond, Va.  | " John H. Hill,* Goldsborough, N. C.   |
| " R. H. Dillard, Edenton, N. C.  | Prof. Lewis A. Sayre, M. D., New York. |

#### OFFICIAL LIST OF CANDIDATES LICENSED BY THE STATE BOARD OF MEDICAL EXAMINERS.

The Board of Medical Examiners of the State of North Carolina, met in the city of Wilmington, May 10th, 1880, and remained in session five days. Thirty-three applicants presented themselves for examination. Twenty-six were found duly qualified, and were accordingly licensed to practice medicine and surgery in North Carolina, to-wit:

Dr. Richard Dillard, Jr., Edenton.

" V. St. Clair McNider, Jackson, Northampton County.

Dr. L. M. Powers, Plymouth.

“ W. C. Galloway, Snow Hill, Green County.

“ K. J. Powers, Camera, Pender County.

“ J. McL. Stansill, Rockingham.

“ J. T. Schonwald, Wilmington.

“ R. H. Adams, Gastonia.

“ L. W. Hunter, Charlotte.

“ W. K. Anders, Gravel Hill.

“ N. B. Herring, Toisnot.

“ M. W. Hill, Statesville.

“ E. T. Speed, Tarborough.

“ S. J. Montague, Winston.

“ J. L. Nicholson, Richlands, Onslow County.

“ John Whitehead, Salisbury.

“ T. W. Harris, Chapel Hill.

“ H. T. Ivy, Fayetteville.

“ A. B. Huntley, Wadesborough.

“ D. B. Frontis, Lexington.

“ J. A. Collins, Enfield.

“ C. M. Pool, Salisbury.

“ John Irwin, Villa Franca.

“ G. H. West, Newton.

“ G. E. Matthews, Ringwood.

“ T. S. Burbank, Wilmington.

The Board of Medical Examiners of the State of North Carolina will hold its next session in Asheville, on Monday before the last Tuesday in May, 1881. The following is the order of examinations :

*Chemistry*.—Dr. P. E. Hines.

*Obstetrics, &c.*—Dr. G. L. Kirby.

*Materia Medica and Therapeutics*.—Dr. T. D. Haigh.

*Practice of Medicine and Pathology*.—Dr. Thomas F. Wood.

*Anatomy*.—Dr. Joseph Graham.

*Physiology*.—Dr. Richard H. Lewis.

*Surgery*.—Dr. H. T. Bahnson.

HENRY T. BAHNSON,

Secretary Board Med. Examiners of North Carolina.

SALEM, N C., May 21st, 1880.

## BOOKS AND PAMPHLETS RECEIVED.

Common Mind-Troubles and the Secret of a Clear Head. By J. Mortimer-Granville, M. D., M. R. C. S. Philadelphia: D. G. Brinton, 115 South Seventh Street. 8vo. Pp. 185. Price, \$1.00.

Aspiration of the Knee-Joint. By Henry O. Marcy, A. M., M. D. Cambridge, Mass.: Pp. 32. Reprint.

Sea-Air and Sea-Bathing. By John Packard, M. D., Surgeon to the Episcopal Hospital. Philadelphia: Presley Blakiston, 1012 Walnut Street, Philadelphia, Pa. Price 50 cents.

Fourth Annual Report of the State Board of Health of the State of Wisconsin. 1879. Madison, Wisconsin: David Atwood, State Printer. 1880. Pp. 165.

Epitome of the Births, Marriages, Still-Births and Deaths in New York City during the year 1879. By John T. Nægle, M. D.

A Postural Method of Copulation for the Cure of some of the Forms of Sterility in the Female. By Walter R. Gillette, M. D. Reprint.

Archives of Laryngology. Edited by Louis Elsberg, M. D., New York. In conjunction with J. Solis Cohen, M. D., Philadelphia; Frederick J. Knight, M. D., Boston; Geo. M. Lefferts, M. D., New York; and Dr. J. Boeckel, Strasburg; Dr. Foulis, Glasgow; Prof. Gerhardt, Würzburg; Dr. Heinze, Leipzig; Professor Krishaber, Paris; Dr. Morell McKenzie, London; Prof. Oertel, Munich; Dr. Smyly, Dublin and Prof. Voltolini, Breslau. (With one lithographic plate and eight wood engravings.) New York: G. P. Putnam & Sons, 182 Fifth Avenue. Issued Quarterly. Vol. 1. Number 1. Price per number \$1.00. Subscription per annum \$3.00

This is a most attractive new quarterly, both in the able composition of its editorial staff, and its mechanical execution. Nothing shows more conclusively the higher rank to which American medicine has attained than this and other works by specialists. The *American Journal of Obstetrics*, the *Annals of the Anatomical and Surgical Society of Brooklyn, New York*, together with the *Archives of Laryngology* afford to the American student an ample substitute for the numerous foreign journals which have so long been their guides and instructors.

# NORTH CAROLINA MEDICAL JOURNAL.

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M. J. DeROSSET, M. D., }  
THOMAS F. WOOD, M. D., } Editors.

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Number 6.                      Wilmington, June, 1880.                      Vol. 5.

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## ORIGINAL COMMUNICATIONS.

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### PELVIC CELLULITIS.\*

By THOMAS J. MOORE, M. D., Charlotte, N. C.

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*Gentlemen of the Medical Society of North Carolina :*

At the last meeting of this Society, held at Greensborough, through your Committee, I was notified of my appointment as essayist for the next meeting to be held at this time and place.

In compliance with that appointment I appear before you to-day, and in the commencement of this paper, I trust that I may be pardoned, for asking at your hands a patient hearing and lenient criticism. In conning over in my mind the various subjects, which I felt might be of interest to the Society, I could think of none that would prove more practical in its nature than that of pelvic cellulitis in the female, as it is the most important and common, by far, of all the diseases with which woman is afflicted. In order to avoid a tiresome repetition I beg leave, before commencing upon my subject, to acknowledge my indebtedness to the works of Professors

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\*Essay delivered before the North Carolina Medical Society held at Wilmington, N. C., May 11th to May 14th, 1880.

Kolb, of Vienna; Schröder, of Bavaria; Thomas, Simms and Barker, of New York; and to the treatise on Gynæcology by the erudite and accomplished scholar, Dr. Thomas Addis Emmet, of the same city.

Like the majority of the diseases of the human system, this disease came under observation and excited the attention of some of the earliest writers, and while it was crudely described and ill-defined, yet, it was given a prominent place in the works of Archigenes, an author of the 2d century, Oribasius of the 4th, Aëtius and Parel, of Aëgina, in the 6th and 7th. Turning from the writers of the past, to those of more modern times, we find the literature of the profession, rich with the productions of the various authors, from the time of Richard Wiseman, of England, who, in 1679, described the disease as "Distempers of the Uterus in Childbed," down to the authors of the present day.

As to the particular name which should be given to the disease, as well as its location, and the parts involved, the widest difference of opinion exists, both in this country and across the water. The disease with which it is most generally associated, and with which it is most likely to be confounded, pelvic peritonitis, has given rise to two schools of medicine, as it were, and we find it named, arbitrarily, as the particular author happens to view the subject, from a pathological standpoint. Its synonymes are peri-metritis, para-metritis, peri-uterine phlegmon, inflammation of the broad ligaments, pelvic cellulitis, pelvic abscess, acute purulent œdema in the connective tissue of the pelvis, the latter so called by Pirogoff.

Under the two first names the schools have virtually arrayed themselves: in France we have Bernutz, Goupil, and Arran, with Schröder, of Germany, insisting that the inflammation excited in the pelvis, and what the English and Americans style pelvic cellulitis, is peri-metritis, or pelvic peritonitis, while pelvic cellulitis, is a rarer disease, one of a lower grade of inflammation, and generally confined to the puerperal state. On the other hand, Nonat and Virchow, with Simpson, of Edinburg, hold almost diametrically, the opposite view: recognizing the disease in question as a genuine cellulitis, the two former give to it the name of para-metritis, the latter that of cellulitis. In America, Professor Thomas styles it



peri-uterine cellulitis, and evidently draws a sharp anatomical line between pelvic peritonitis and pelvic cellulitis, while Dr. Emmet and Professor Barker consider these two diseases, as almost invariably associated, and that they should be named as the leading characteristics of the one predominate over those of the other. The disease which we are endeavoring to describe is true pelvic cellulitis—a genuine phlegmon of the cellular tissue of the pelvis, restricted to the female, and more especially to that portion of the cellular tissue surrounding the organs contained in the pelvis, and it frequently, if not generally, has as a complication limited pelvic peritonitis. In considering the relation of parts in this region, we are struck with *two* leading anatomical features, the manner in which the peritoneal and cellular tissues are arranged. Commencing with the former, we find, that after extending along the abdominal parieties, it is reflected upon the posterior portion of the bladder, thence over the anterior three-fourths of the uterus, the fundus and whole of the posterior portion, the upper fourth of the vagina to the rectum, and from thence becomes continuous with the posterior abdominal section, covering the spine: as this tissue becomes reflected it forms folds and ligaments. These reflections serve to retain the organs in position, and also act as a general covering to the whole of this section. The broad ligaments, its reflections from either side of the uterus, contain the Fallopian tubes, the ovaries with their ligaments, the round ligaments, the nutrient vessels and nerves, and a limited number of scattered fibres. Its falciform folds, seen in the interval that separates the bladder from the uterus, are called vesico-uterine or anterior ligaments: then we have Douglas' cul de sac, formed, by the reflection of peritoneum from uterus and vagina to rectum, and limited on either side by the recto-uterine ligaments, the marginal reflections of peritoneum, from the uterus to the rectum.

Now having found where the roof of our structure is, let us examine what lies beneath it of importance to us; in every direction from above downward, from side to side, wherever we have not space occupied by the contained organs, we find cellular tissue, between the bladder and uterus, and uterus and rectum above, about the vagina and rectum below, we find this cellular tissue: this tissue which in filling up interspaces, surrounding parts, and

from its remarkable elasticity, serves to act as a resistant to either pressure or shock, let it come from whatever direction it may. It differs from the ordinary connective tissue in having a larger proportion of yellow elastic fibre, than is generally found in connective tissue in other parts. It lies between the folds of the broad and other ligaments, serving to retain the proper relation of parts. Its remarkable elasticity, renders it capable of meeting the requirements of the organs and tissues it surrounds and connects. The blood-vessels and nerves which are more numerous in this section than in any other part of the body, course through it in various directions, doubling time after time upon themselves, and thus nature which is never lavish, but always provident, enables by this tortuosity on the one part, and elasticity upon the other, these various vessels, to adapt themselves to any situation in which they may be placed, by the relative disarrangement of the organs, the one to the other, as in uterine displacements, or in the ascent of the uterus during pregnancy. Inflammation of this connective tissue in the female, is generally, as before stated, classed on this side of the water, as pelvic cellulitis, and while I am aware that some of our most able writers, insist upon drawing a sharp line between cellulitis on the one hand, and pelvic peritonitis on the other, I do not believe that we ever have either of these diseases fully developed without involving, to a certain extent, the tissue of the other. We are met, however, by this theoretical obstacle, that general peritonitis is often found without involving the pelvic portion, but while this is true, it was only by clinical and autopsical observation that this fact was elucidated ; in the same manner it has been ascertained, that anything like marked cellulitis, involves the peritoneum, as in pneumonia, when the superficial portion of any section of the lung is affected, invariably, an inflammatory effect is produced, upon the corresponding pleura, so with the cellular tissue : wherever inflammation affects the connective tissue of the broad ligaments, or those of the utero-sacral, it is liable to make a marked inflammatory impression upon the regional peritoneum of these parts. This is the view taken by Drs. Emmet and Barker, who boldly avow their inability to make a differential diagnosis between the diseases at the bed-side. This disease appears to have peculiar places of election, and while it may become general, and involve

the whole of the connective tissue in the pelvis, such is rarely the case, and when this condition of affairs exists, the original malady, has been found to have started in some one of its usual points of election. In one or the other of the broad ligaments, upon its posterior face, near the cervix, in the majority of cases the left, we find is the usual point of attack. Next, in point of election, comes the cellular tissue connecting the vagina and rectum, generally upon the right side, and implicating, the right utero rectal ligament; occasionally it is found between the base of the bladder and uterus, or between the bladder and abdominal parietes. While it is true that cellulitis generally involves the peritoneum, we occasionally meet with circumscribed cases, where the symptoms have been so mild, as to fail to excite the attention of either the practitioner or patient, and in physical exploration, by accident as it were, it has been stumbled upon. Lisfranc discovering certain circumscribed tumors in immediate contact with the womb, came to the conclusion that they were partial parenchymatous metritis, which had resulted in enlargement of a part of the organ. Monsieur Monat, however, in 1849, in his investigations arrived at a contrary opinion, and declared, that he believed them to be circumscribed inflammation of the connective tissue, immediately around the uterus, between the cervix and rectum, the cervix and bladder, and immediately by the side of the neck. Professor Thomas is disposed to cavil at the conclusions of the latter, as he has only been able to find in two reported cases, an account of so limited a cellulitis, one by M. Demarquay, the other by M. Simon. Cellulitis may be said to have three stages, the first, as in other inflammations, being that of congestion, the second that of effusion, and if at this time, resolution does not take place, the third stage, that of suppuration, follows. The disease may be arrested in any of its stages, being in all respects, a genuine phlegmon, going through all of its various stages like inflamed connective tissue, in other parts. After suppuration we may have a fourth stage, that of pelvic abscess; unless we have that condition of affairs taking place, as described by Kolb, in his treatise on "Pathological Anatomy of the Female Sexual Organs," where he says, "Purulent collections, encysted by proliferation of peritoneal connective tissue, and where a considerable amount of pus collects, between adherent intestines, and in encysted

portions of the peritoneum ; pus thus encysted, may become harmless, from fatty degeneration, and may undoubtedly be absorbed or transformed into a whitish fatty pulp, mixed with calcareous salts."

While these remarks are intended to apply when the abscesses are surrounded, wholly by, either peritoneal, or adventitious tissue, I take it for granted that the same rule holds, whether the pus be surrounded by the tissue as above described, or by any other tissues, and, therefore, would be true of abscesses of the cellular tissue as well; for even here these abscesses are generally covered by peritoneum. When suppuration takes place in either of the broad ligaments, the ovaries are often found embedded in pus, and sometimes the integrity of their own structure is involved, and the Fallopian tubes are also found implicated, frequently filled with pus, or constricted at their uterine and ovarian extremities, and filled with sero-purulent material, constituting what is called tubal dropsy. Professor Thomas cited fourteen cases from reports of Monat, West, McClintock, M. Demarquay, M. Simon, Aran and Bourdon, setting forth the seat of purulent collections in the cellular tissue, as ascertained by post-mortem ; but two cases presented instances of cellulitis, where the diseases failed to involve the cellular tissue, the broad ligaments, ovaritis, and tubes. One of these proved to be even doubtful, for while an abscess in the cellular tissue existed, another was discovered in the cul de sac of Douglas. It is a mooted point, what gives rise to these purulent collections, as the cellular tissue, of course, must be the chief seat of the collection of pus, and often, especially when the broad ligaments are involved we find the ovaries, Fallopian tubes, as well as the lining membrane of the uterus—all more or less inflamed, the question naturally arising whether some one of these organs, or all, as the case may be, have not been the original seat of the inflammation, or whether they have not been implicated in a secondary manner. It has been asserted with much emphasis, by some of the most eminent authors of our day, that inflammation can never arise, primarily, in the cellular tissue, but is invariably a secondary affection : hence the deduction naturally follows, that the disturbing influence, lies in the uterus, ovaries or Fallopian tubes, while, as we shall see further on, when we come to consider the etiology of this disease, the exciting causes of cellulitis, are numerous and varied. Yet it seems but rational to

concur with Dr. Emmet in his view of the question, that invariably the disturbing element, in the non-puerperal cases, acting directly through the sympathetic system, results in such local disturbance, as to derange nutrition, and cause those parts to become affected, which from their anatomical and physiological relations, would be the most likely to be involved, the pelvic connective tissue. All of the organs contained in the pelvis are entirely dependent, both for the blood that supplies them, and the nerves that preside over them, to the conducting support of this connective tissue, the blood that returns from them traveling the same road, and as we well know how tortuous and numerous all of these vessels are, is it not reasonable to suppose that disturbing influences would first make themselves felt here, instead of having to travel a long and varied track, to make a more distant impression? How readily, venous congestion can be brought about in this quarter! And why may not this be the leading feature in those local disturbances, which in the end, culminate in this malady. While the disturbing influences, centre their forces in the non-puerperal cases, directly in the cellular tissue, in those cases arising from the puerperal condition, the contrary exists. The part, the connective tissues here plays, is purely secondary, to the uterine disturbance: the cellular inflammation often continuing, after all evidence of the puerperal disease has disappeared, as in laceration of the neck in childbirth, or abortion, where it has rapidly healed, and then the continuing cellulitis may give rise to pathological disturbances, acting secondarily on the uterus, and thus producing various uterine diseases. It has been asserted that metritis is frequently the cause of cellulitis; while this is often true in regard to this condition in the puerperal, it is equally true, as asserted by both Drs. Thomas and Emmet, that metritis never occurs in the non-puerperal woman, as neither inflammation or pus, has ever been found in the uterine tissue except in childbirth, or where malignant disease has been ascertained to exist.

It has often been asserted that ovaritis, frequently gives rise to cellulitis. Dr. Emmet, however, states that he has never seen ovaritis, without inflammation of the neighboring tissues, and where he has been called in early, he has always detected the cellulitis before the ovary became involved. So far as the Fallopian tubes



are concerned, except in cases of poisoning by gonorrhœa, or some other virulent poison exciting inflammation of its mucous membrane, it is invariably secondary to some previous lesion in the cellular tissue.

*Etiology of Cellulitis.*—It will become evident from a casual observation, that for convenience of description, the causes of this disease should be divided into those arising in the puerperal, and the non-puerperal condition. By far the majority of cases are produced in the former state, owing to the peculiar vascular condition of the uterus, as well as those accidents to which females are liable in this condition. Over two-thirds of all the reported cases of the disease, have been attributed to parturition and abortion. In childbirth, the laceration of the cervix, either partial or complete, may produce such an impression on the connective tissue as to light up the disease; contusions, owing to undue pelvic proportion to the child's head, as in rickets or rachitis, when we have the conjugate diameter shortened; in the kyphotic pelvis where the reverse in the disproportion of the diameters to that of rachitis exists. The same difficulties arise in the osteomalacic pelvis, in the spondylolisthelic pelvis, in Nægel's obliquely distorted pelvis. They all present obstacles to labor, rendering it difficult, painful and prolonged, and often impossible, without instrumental interference, and in all we have that condition of affairs which may light up the disease. Hydrocephalus in the child, an unusually large head, a mal-position as to presentation of part, the lodging of the head, for hours, at some one point, turning, and other manual interference, either at the neck or within the womb, a rigid os, a delivery by instruments, are all capable, if not liable to produce it. The same condition of affairs may be brought about, either in premature labor or abortion, by violence done the neck; after labor, either the special poison of puerperal fever, or its epidemic and atmospheric influences in hospitals or cities, may induce it. Metritis, endometritis, and especially phlebitis, as set forth by Dr. Matthews Duncan, may all evidently produce it. That phlebitis can produce it, is not only asserted by Dr. Emmet, but has been actually proved by him, in the dead house. That the connective tissue is always involved to a limited extent, in phlebitis, he concedes, but in this special form, arterial congestion of a marked type, exists, and the inflammation is

invariably more decided. Extra uterine pregnancy is another existing cause. Too early rising from bed, cold contracted during the lying-in state, imprudence in standing too long, attempting to walk too early, over-exertion of any kind, too early or violent copulation, may all give rise to it. In the non-puerperal state, we find a broad field to search in, and a large number of diseases, to arraign, for this cellular sin. In all of the surgical operations, upon the uterus, where we have as a result, irritation or inflammation, we run the risk of producing cellulitis; slitting the neck to overcome obstructions produced by flexures, amputation of the cervix, the introduction of the sound or probe, applications of an alterative character, such as iodine, per sulphate of iron, etc., it matters not how delicately they may be made, under certain conditions, will cause it. Injections of simple hot water, or medicated, when by accident thrown into the undilated uterus, give rise to this disease, by the escape of the fluid through the Fallopian tubes into the tissue. Sponge tents, however guardedly they may be used, or how often the patient may have escaped in previous applications, will suddenly light it up, and when least expected. This most probably arises from the abrasion or destruction of the mucous membrane, and the absorption of septic matter. It is almost superfluous to allude to a badly fitting pessary, as a cause, whether it be a uterine stem, or a vaginal one. The stem pessary when used to correct a flexure, though from a mechanical stand point, would seem admirably adapted to the desired end, yet, when placed in the uterus, an organ of such delicate sensibility, it becomes an instrument of danger, more likely to excite marked inflammation, with accompanying cellulitis, and often peritonitis, than to correct the mechanical displacement. When prolapse of the uterus takes place, if not corrected in time, it will produce so much irritation, by traction upon the utero-rectal ligaments, as to light up cellulitis, and this is one of the reasons why the cellular tissue of these ligaments becomes so often involved; the same forces being brought into play into retro-version, we are liable to have similar results, and when we have retro-flexion superadded to the version, we can almost always feel assured that the flexion has been brought about by inflammation of cellular tissue, and the ligaments of the uterus, with a subsequent contraction of these ligaments. To ante-version,

under certain circumstances, we may lay the charge of producing this disease ; a relative degree of ante-version may be considered, normal, to the uterus, at puberty, at least such is the conclusion arrived at by our most experienced observers, and all the functions of the uterus, can be properly performed without pain, unless marked deflection in this direction exists. Whenever we have vesical tenesmus and irritation, we may rest assured, that the neck of the bladder, is undergoing a certain amount of traction, either from the settling down of the uterus into a state of partial prolapse, or an exaggeration of the version has taken place, and the neck of the uterus being carried upwards and backwards produces traction of the anterior wall of the vagina, and in this way acts upon the neck of the bladder. Under either of these conditions of the uterus, owing to the interference produced by obstructing the circulation, and the amount of traction, brought to bear upon the ligaments, coupled with the vesical irritation, an attack of cellulitis may be produced by the least exposure, or imprudence upon the part of the woman. Where we have ante-flexion, and the uterus descends from overweight, owing to either hypertrophy or congestion, we may consider the connective tissue, as being constantly liable to take on inflammation, especially during the menstrual period, or from any undue exposure on the part of the patient. Where lateral versions are found to exist, a careful examination into the history of the cases, will generally show that the patients have suffered from an attack of cellulitis, at a period, more or less remote, and the version will be found, upon the side of the uterus, which was the region of attack. Lateral versions may be truly considered, primarily, as one of the results of cellulitis, and never a cause, the version being brought about by a subsequent contraction of the affected parts ; but, after the establishment of the version, it may be the means of lighting up subsequent attacks of cellulitis. Lateral flexures are believed to be caused, by the shortening of the broad ligament, upon the side where the version exists, and this shortening is produced by inflammation in the ligament of that side, caused by the previous existence of either ante or retro-version. Other exciting causes in the non-puerperal state, such as rupture of cysts, the escape of any foreign body, either into the cavity of the peritoneum, the rupture of a blood-vessel or vessels, are all calculated to produce, both pelvic peritonitis and cellulitis.

Professor Emmet has constructed a number of tables, setting forth, the supposed causes of cellulitis, its complications, its effect upon the menstrual function and its attending results. From them I gather, that of the total number of cases, reported by him (303), over fifty-one per cent. could not be traced to an assignable cause; the remaining cases suffered, from other lesions, in addition to cellulitis. From an examination of his patients, where no uterine disease could be detected, they expressed the following opinion as to the existing cause. The greater number of unmarried, traced their disease to exposure and imprudence in dress; a large percentage of the sterile, attributed their condition, to the married state; the fruitful woman had suffered since the termination of pregnancy. It is a melancholy fact, but never the less true, that a large percentage of his patients confessed, to the submission to criminal abortion, a practice which appears to be on the increase, at the present time, as additional facilities are presented in our larger towns and cities, where advertising experts proffer for a consideration their aid, to those who may desire it, and where every facility is offered for the concealment of the crime. The efforts at preventing conception are even more common, and the means resorted to, rarely fail, to inflict upon these would be avoiders of maternal responsibility, that just retribution, which nature almost invariably visits upon those who attempt to thwart the harmony of her laws. The sewing machine is justly burthened with a relative proportion of sufferers; where uterine disease exists, and during the menstrual period, a total avoidance of its use is the only safe rule. Amongst the diseases reported, as complications, fifty-four per cent. are attributed to uterine displacements, while lacerations of the cervix, come next on the list, and the latter disease is considered as directly causative of repeated attacks in the same individual. Menstruation after cellulitis, presents a variety of phases, and from statistics furnished, no definite law can be observed. Sterility is a common sequel of cellulitis, and the tables before referred to, are full upon this subject—in all of the cases it has been my misfortune to treat, this proved to be the rule, all being barren from the time of marriage, save one, a primipara, and her attack followed within a few days after parturition.

*Prognosis.*—It is impossible to predict what are to be the results

of cellulitis, when called to the bedside, the disease appears to be as capricious in its character as the causes giving rise to it are numerous and varied. The extent of tissue involved offers no criterion by which to judge; frequently we find after parturition, an extensive cellulitis, rapidly disappear, while, upon some other occasion, an apparently, inconsiderable attack will linger for months or years; and the same may be said of cases which have their origin in the non-puerperal state. There is one condition of the uterus, which appears to be singularly unfortunate in having it as a complication, the cellulitis often proving obstinate in duration, and frequently being the means of producing repeated attacks. I refer to lacerated cervix, either partial or complete, and here the opportunity presents itself to the physician, of not only accomplishing much, in the way of alleviating the malady, but frequently of bringing about a permanent cure, by judicious surgical interference, after the manner described by Dr. Emmet in his article styled, "Laceration of the Cervix." So far as the involvement of life is concerned, the prognosis is generally favorable; in cellulitis, after parturition, we should remember, however, the liability to general peritonitis, which should cause us to be somewhat more guarded in expressing an opinion as to results. The complications, peritonitis, (that is chronic peritonitis,) salpingitis and ovaritis, frequently remain after the disease has disappeared, as an attestation of the ravages of a permanent nature, which have been committed. Pelvic abscess, often more persistent than any of these, is frequently left behind as a result.

*Symptoms.*—For convenience of description it is well to divide the symptoms of this disease into four leading types, all of which present marked features of their own; in the first we have chill, fever, pain, quick pulse, furred tongue, and all of the ordinary concomitants of inflammation; 2d, those accompanied by fever and pain without chill; 3d, those indicated by pain and local elevation of temperature with hectic evidences in the evening; 4th, where the disease has produced so little disturbance as to remain completely masked, until by accident, as it were, it has been discovered, the patient complaining of a certain degree of pelvic disturbance such as weight, oppression, with general lassitude, when the physician being led to make an examination per vaginum, fre-



quently groping in the dark from the sensible signs, suddenly discovers the cause of the disturbance to be pelvic cellulitis.

In the first type, both in the puerperal and non-puerperal, the chill is more or less marked, followed by pronounced fever as soon as reaction takes place, which is more or less rapid according to the amount of shock produced, or extent of tissue involved. This is usually a continued fever, and observes the laws peculiar to fevers of this type, being lower in the morning, and exacerbating in the afternoon. The fever is generally moderate, the thermometer showing, usually, a temperature varying from  $100^{\circ}$  to  $101^{\circ}$  in the morning, and  $102^{\circ}$  to  $103^{\circ}$  in the afternoon. There are cases, however, where the fever remains high continuously and where the evening markings show a temperature of  $105^{\circ}$  to  $107^{\circ}$ . These latter are decidedly grave in character, and evince the fact that the peritoneum is extensively involved where the temperature stands for any length of time at  $105^{\circ}$ , our prognosis must be of an unfavorable nature, the patients, in fact, rarely recovering. The pulse ranges from 90 to 120, according as the disease is, grave or the circulation disturbed, either from extensive congestion, or nervous irritation; the pulse will exhibit peculiarities as the peritoneum is or is not involved, showing that tension and rapidity in the former which is peculiar to serous inflammation. Pain is usually severe just in proportion to extent of peritoneal inflammation; of course, we often have pain in uncomplicated cellulitis, but I am now describing the severe forms of the disease. The pain exists frequently upon one side, often on both; we also have pain in the back and pain radiating in various directions, through the pelvis, down the anterior and inner aspect of the thighs, down the posterior part, taking the direction of the sciatic nerve. These pains arise either from direct pressure or from the congestion of parts, implicating either the origin or tract of the nerves, or they are purely of a reflex character. With the pain we usually have more or less tympanites and tenderness in the hypogastric region, confined to one or both sides. Nausea and vomiting are found as complications. Nausea exists often early in the disease as a reflex result, when it is accompanied with vomiting loaded with bile and of frequent occurrence, it indicates involvement of the peritoneum in proportion to its severity and the quantity of bile ejected. Now we have peritonitis as the

leading disease, evinced by a sunken pinched condition of face, with palor and leaden hue of countenance, peculiarity of voice, decubitus of peritonitis marked, patient lying on back, with limbs drawn up, and indisposed to move in any manner for fear of exciting pain. This condition is sometimes simulated by persons of hysterical temperament, when suffering from one of their attacks. Absence of all febrile disturbance, and want of hypogastric tenderness from pressure, while their attention is called off from the disease, will readily clear up all vagueness upon this subject. Occasionally, where the peritonitis is of a very violent type from the inception of the attack there is a total absence of pain, arising from the great amount of shock, produced by the sudden and extensive involvement of the tissue. The fever in an ordinary attack of this disease is from the first mild in character, often, in fact, generally not ushered in by a chill, and is of a decidedly remittent type; when intermittent exists, the disease has spent its force, and either convalescence has set in, or pyogenic influences have been brought into play. In the remittent form of the disease the thermometer may prove deceptive when applied to the usually selected points of the body, but when placed in the vagina a pronounced elevation will be evident during the afternoon, and a general rise of temperature will be manifest. Here, I trust I may be pardoned for a slight digression in order to make a few observations in regard to thermometry. In no disease is the use of this instrument more important than in this, hence the necessity of having accurate instruments, and making observations sufficiently often during the day and at the proper hours. Nearly all of the instruments we have, owing to the avarice of manufacturers are inaccurate, no two of them measuring alike, and leaving us in a constant state of doubt as to whether our observations are to be relied upon or not. These inaccuracies on the one hand, and failure of agreement upon the other, arise from the different degrees of contractility existing between the two substances, glass and mercury; and time is required for them to uniformly adapt themselves to each other. Observation has determined that at least two years are necessary for this condition to be reached, and no instrument should be graduated until it has been laid away for at least the time above indicated. The self-registering thermometers are best, as they not only elevate the

mercury to the proper point, but it remains there serving for future reference as often as desired. The point of election in taking the temperature is also important, of course. If we could, the placing of the thermometer in the ascending cava after leaving the liver, or in the chambers of the heart, would more accurately indicate the central temperature, which is the one we are seeking; as this is not practical, observers have been driven to the mouth, rectum, vagina and axilla, as regions best adapted for the purpose of taking temperature. Strong arguments may be urged in advocacy of each one of these selected points, but for general application I believe the *axilla* offers a greater number of advantages than the others, for it meets the indications in the largest range of cases, and spares the feelings of a numerous class of patients, when we abstain from placing the instruments in either the rectum or vagina. I am aware that the position I here take is contrary to the opinion of the German writers, but I am fortunate in being sustained by Dr. Seguin, and others in this country. The point of application being determined, the instrument should be allowed to remain from eight to ten minutes in situ, before finally removing it. During the last three minutes the instrument can be removed several times and immediately returned in order to discover whether the mercury is undergoing change or not. Daily observations should frequently be made in the commencement of any disease, and at stated intervals, in order to discover its progressive type; when this has been determined, two, or at most, four observations a day will suffice. In country practice, we are often not able to make more than two observations in the twenty-four hours, and then we should select those hours, when there exists the widest departure from the normal in the way of elevation and depression. The hours from seven to nine in the morning and from four to six in the afternoon, have been ascertained to meet these requirements, the former representing the period of depression, the latter that of elevation, therefore these hours should be selected if possible. It is important in the disease under consideration, that the vaginal temperature should also be taken as this will give the amount of local disturbance over that of general constitutional derangement. In health, the difference between the temperature of vagina and general temperature, has been variously estimated at 6-10ths to 1°. Deviations from this

proportion, will be the measure of difference indicating the departure from the norm.

*Physical Signs.*—We must at last depend upon a careful consideration of the physical signs in order to reach a correct diagnosis. During the first stage of the disease as the finger is intruded in the vagina, a certain degree of œdema producing a sensation of puffiness will be evinced, and the temperature of the parts will prove to be decidedly elevated. By examining carefully in all directions we are capable of, from before backward, from side to side, above and below, more or less tenderness will become evident, and when the finger reaches some one of the favorite seats of the disease, we find a point of marked tenderness, which is increased by conjoined manipulation.

The stage of effusion being reached, examination in addition to the symptoms above described, will discover through conjoined manipulation a tumor, varying in size from a small nut to that of an orange in one or the other of the broad ligaments, upon the side of the cervix in any direction, occasionally, in the wall of the vagina; the points of election being the left broad ligament, then the right, then immediately beside the neck in one or the other of the uterosacral ligaments. The tumor sometimes appears as if it was a part of the uterus, a projection of its lateral margin, so close to its proximity, but usually is separated from it by a well marked furrow, or else somewhat removed from it, often extending up into the iliac fossa. The tumor is only movable when it is circumscribed and lies quite close to the uterus, moving with it and producing the impression that it is an appendage of the organ. When the disease has involved the peritoneum the uterus becomes fixed in position, and the roof of the pelvis offers that resistance, which imparts to the finger the impression as if it were a deal board. In vaginal examinations, the regional anatomy should be carefully kept in our minds; every section should be explored, the whole tract of the vagina, the broad ligaments, Douglas' cul de sac, and the anterior part of the neck and body of the uterus. Conjoined manipulation will be found essential, and in all tumors situated posteriorly, or latero-posteriorly, a careful examination per rectum is deemed necessary.

The disease after passing into the third stage exhibits in addition

to the signs before described, a greater displacement of the uterus than has previously existed, being pushed far out of its normal line in a direction opposite to that of the accumulation of pus. It may be borne down by the weight of the mass, and lie upon the floor of the pelvis, it may take the direction of any of the versions, it can become flexed, owing to the neck being fixed while the body remains movable. Whenever its normal relations have been disturbed, wherever it has been placed, it is liable to remain fixed from being held in such position by adhesive inflammation. The disease may be confounded with fibrous tumor or hematocele. Fibrous tumors, as a rule, are round, those of cellulitis, rather flat. Fibrous tumors are slow in their development, painless, free from tenderness and mobile, they are liable to be multiple, they feel as if they constituted a part of the organ, while those of cellulitis generally appear to be distinct from the uterus.

In hematocele, the opposite of acute inflammation occurs; it appears generally without premonitory symptoms, the evidences of collapse set in at once, we have great prostration, coldness, dyspnoea, and hemorrhage. The tumor felt, usually, in Douglas' cul de sac is soft in the beginning, is readily reducible, by changing the position of the patient unless the hemorrhage has been very great, fluctuates under manipulation, and only becomes firm after a certain lapse of time by partial absorption and peritoneal fixation.

The consequences of cellulitis depend entirely upon the recuperative power of the patient and the extent to which the disease has gone, in other words, the amount of damage which has been inflicted. Where, after convalescence, the œdema of the tissue rapidly disappears, and the peritoneal involvement yields, owing to an effort of nature by absorption to remove the same, we have the uterus with their appendages resuming their normal relations, and a gradual restoration of the general health attained. Sometimes after the displacement of the uterus by the deposit or formation on pus when the peritoneum is implicated, after either the absorption of the material or the discharge of the purulent mass, we may see by the subsequent retraction of the peritoneum, such displacement rectified, as is sometimes observed in lateral versions. Generally however, the rule is the converse of this, and where peritoneal contraction takes place, permanent uterine displacement results, which



can only be remedied by the interference of art. From these displacements arise one of the chief causes of sterility; conception often takes place in this condition, and gestation proceeds to that point where it becomes necessary for the uterus to expand in order to meet the requirements of its contents; its confined condition preventing this irritation, follows, and the products of conception are thrown off. Another grave cause of sterility, is where the inflammation has extended to the broad ligament, involving the ovary and Fallopian tubes; occasionally the ovary takes on suppurative action and becomes entirely destroyed; again, adhesive lymph being thrown around it, contraction sets in, a forced atrophy takes place, and its functional power ceases to exist. Ovarian neuralgia so often found, also reflex neuralgia in other parts, are often the sequences of this ovarian imprisonment and atrophy. Adhesive lymph by incarcerating the Fallopian tube may displace it in such a way, or so contract its calibre as to prevent the performance of its selected office. The fimbriated extremity being unable to reach the natural position, may fail to receive the ovum; again, a capsule of lymph may so effectually invest the ovary as to prevent the escape of the ovum after it has reached maturity and is ready to make its departure from a Graafian follicle. In addition to sterility, amenorrhœa, dysmenorrhœa, menorrhagia and displacements, all are to be classed as the frequent resultants of this capricious and dangerous disease. There is another peculiarity connected with this malady, neither violence of symptoms nor duration of disease, furnish any key as to the amount of damage done. An attack of cellulitis of the mildest type with symptoms so little prominent as to be overlooked by the practitioner can inflict irreparable injury. Upon the subsidence of the active symptoms of this disease in the event that nature aided or unaided by treatment has proved herself unable to dispose of the foreign material deposited in the parts, we have to fear the breaking down of said material into puriform circumscribed masses, which is indicated by all of the symptoms of hectic fever, such as rigors of frequent occurrence, fever, followed by perspiration, complexion of a leaden, often of an icterode hue. The above symptoms all indicate that the deposit has become purulent, and the patient frequently becomes extremely feeble and emaciated, and often runs into a rapid decline. • This condition of

affairs is evidently brought about as hectic fever is produced elsewhere, and is an effort of nature to rid herself of absorbed puriform material. It is true, as has been observed by both Prof. Kolb and Dr. Emmet, that we have occasionally pus formations, so well sacculated, as to produce none of the above symptoms, these sacs remaining for years in this condition without producing disturbance of any kind, and sometimes in an effort at diagnosis, being mistaken for fibroids. Then, again, the patient may be spared constitutional annoyance by the pus undergoing fatty degeneration and becoming absorbed, or the the pus may be transformed into a whitish fatty pulp, mixed with calcareous salts, and so remain indefinitely.

The rule, however, is that upon the formation of pus, there will exist all the evidences of constitutional disturbance, and the abscesses which are at first minute in size, continue to excite destructive inflammation in the connective tissue, and gradually increase until they finally coalesce, and form one or more large circumscribed abscesses. These accumulations of pus travel in the direction where least resistance is offered, and if not opened by art, finally establish a passage of escape for themselves. There are a number of directions, some of them very erratic, taken by the discharge, the opening being sometimes through the abdominal walls in various situ, through the pelvic roof into the peritoneal cavity, through the pelvic viscera, and in the order of frequency, into the vagina, rectum, bladder, uterus and urethra, through the floor of the pelvis near the rectum, and the various foramina, the obturators and sacro-sciatic; occasionally into the small intestine; again, it follows the direction of the psoas muscle, opening at the groin. The direction of the track of discharge has been known to be long and tortuous. Dr. Echeveria reports a case of the pus escaping through the sciatic foramen, burrowing upwards and forwards, making its exit near the great trochanter. Occasionally the discharge has been poured into one of the labia majora; again burrowings under the glutei or between the muscles along the inner aspect of the thigh have been noted.

Unless a proper diagnosis has been previously made, discharges so remote from the seat of disease, are but too well calculated to mislead the physician. The usual seat of the openings for the non-puerperal, are, in their order of frequency, the posterior cul de sac of the vagina, from either of the broad ligaments, generally the left, but in either case, the opening will be discovered a little

posteriorly and to one side of the uterine neck : often the abscess discharges into the rectum, and with much less frequency pours into the bladder. In those cases peculiar to the puerperal state, Dr. McClintock and Prof. Barker, in their remarks upon the subject, are disposed to believe that the abdominal walls, the rectum and vagina are the most generally selected points. There is, of course, much difference in respect to the safety of the patient, as to the point of selection, for discharge ; through the peritoneum and bladder, are the most dangerous : pointing in the former situation almost inevitably leads to the death of the patient ; discharge, however, in this direction is generally averted by the formation of adventitious tissue, which resists farther encroachment. In those cases where the discharge opens in one of the most dependent parts of the sac, in a short time shrinking occurs in the walls of the cavity, the discharge grows rapidly less, adhesive inflammation takes place between the walls of the sac, and all of the exhaustive causes having disappeared, the patient rapidly recovers. Conditions more unfavorable occasionally present themselves ; the walls of the abscess may be so thick that they cannot come together, or, owing to some other cause, the cavity fails to be obliterated, a pyogenic membrane forms, lining this cavity, and continues to secrete and pour out pus ; in proportion to the amount of discharge, and the irritation produced will the constitution of the patient be affected, and she is at last called upon to tax all of her physical resources to resist the prostrating inroads of the disease, and unless greatly aided by art, she is liable to succumb.

*Treatment.*—When called to a patient suffering from cellulitis, if seen at its inception, which, however is rare, the physician should endeavor to bring about reaction by means of warm applications, such as bottles filled with hot water, applied to the feet and lower extremities, a warm stimulating drink generally of an alcoholic character ; a large poultice placed over the abdomen will prove of service. So soon as reaction has become well established, leeches may be applied to the hypogastrium, the perineum, and around the margin of the anus, for the purpose of relieving local congestion. I need not here go over the ground which has been so often canvassed for the purpose of giving the pros and cons upon the subject of the extraction of blood, as I take it for granted that

all parties concede that there is nothing equal to the local abstraction of blood for the relief of active congestion. The bleeding should be encouraged by the use of warm applications, until from six to twelve ounces, according to the strength of the patient, has been taken.

When we can select the part to which the leeches should be applied, the margin of the anus, owing to the arrangement of its blood-vessels, will more directly and speedily accomplish the the desired end. By abstracting the blood from the hemorrhoidal veins, the portal circulation, becomes directly influenced, and in this way, owing to their intimate association the pelvic circulation becomes at once favorably affected. Simultaneous with the application of leeches, where the febrile action is high, and the arterial circulation markedly increased, we should at once resort to those remedies, which have a tendency to control the circulation and reduce the temperature. Standing at the head of the list is *veratrum viride*, given at such intervals and in such doses as may be required according to the strength and condition of the patient. This drug, however, can only be used on rare and special occasions, as quite the larger number of patients cannot tolerate its depressing effects. Quinine given in as large doses as the patient can bear without inconvenience will prove most valuable. It is best given in one large dose daily, and continued until febrile reaction has been overcome; at this stage of the disease, the drug is given strictly for its antipyretic powers. Farther on we will have occasion to recommend it for its anti-pyrogenetic effect.

With the use of these drugs, we must in addition, apply continued warmth to the abdomen, either by compresses wrung out in hot water, or warm poultices, of which linseed meal is the best. These applications are to be repeated sufficiently often to keep up a uniform temperature, should be covered with oil silk, and retained in situ by a bandage of some soft elastic material, flannel is to be preferred. So soon as reaction from chill has set in, if we are so fortunate as to see the patient at this early stage, we must commence the use of hot water and vaginal injections, which are by far, superior to all other remedial agents we have at our command and the extent to which they may be pushed is truly astounding. The first few hours after reaction determine the duration, severity, and

what is still more important, the probable results of the attack. Moments well spent will now bridge over chasms, and minutes may almost be counted as hours. These injections must be with short intervals, continued for hours, they are the only means that we possess which can abort an attack of cellulitis. The manner in which heat acts when water is used as a vehicle, has been diligently studied and practically applied by Dr. Emmet, who regards it as the most important of all applications to the uterus and its appendages in meeting the widest range of disease. The first effect of heat, when applied to the body, is to produce relaxation, followed soon after by contraction of a decided and lasting character; the converse of cold, which first retracts and by reaction of parts causes subsequent relaxation.

Taking advantage of these ascertained laws of heat, he has been most fortunate in its application to the pelvic region; do not understand me for a moment to suggest that he was either the discoverer of the principle, or the only one who has used hot water in the treatment of female diseases. Professors Barker and Thomas are most happy and full in their suggestions upon the same subject. The range of temperature of the water, according to Dr. Emmet depends upon the feelings of your patient, and as to the extremes he establishes the scale by Fahrenheit from 100° to 110°, using the highest temperature that can be tolerated without inconvenience to the patient. In order to give the injection, the patient should be made as comfortable as possible, a pillow should be placed under her back, a bed-pan under her in position, a Davidson's syringe should be used with its nozzle covered with some non-conducting material, or the nozzle should be made of horn, turned wood or some other indifferent conductor of heat. A rubber tube may be attached to the pan, so as to conduct the water into some receptacle below, and then with an assistant at hand to relieve you when exhausted, you can prepare for work. The best rule is to continue the injection until the fever subsides, for then we may feel reasonably sure that the danger has been averted. By the use of hot water we so stimulate the vessels of the pelvis to contraction as to ward off congestion of the parts, thus aborting the disease in the outset. Pain in this, the first stage, must be controlled at once as it is the expression of nerve irritation with accompanying congestion. In



order to accomplish this some one of the anodynes must be resorted to. None are equal to the preparations of opium; the dose should be regulated by the degree of pain, and generally it is best at the onset to give a hypodermic injection, following this at a proper interval with rectal injections of starch and some one of the liquid preparations; Battley's sedative liquor or McMan's elixir I prefer. Powdered opium can be used with starch, or if deemed advisable, cocoa suppositories containing opium. We should be guarded not to push the drug too far, we are not endeavoring to overcome the peristaltic action of the bowels, which is indispensable in general peritonitis. We desire merely to control pain. As only the rectal portion of the alimentary tract is here involved, we would rejoice to see semi-fluid evacuations daily, instead of having to contend with the marked constipation which usually exists.

We have now to consider exudation, that stage of cellulitis which is usually the first seen by the physician and which may last but a few hours, though it may continue for many days. There will be either an absence of fever or great reduction of temperature, the pain will be decidedly lessened, the elevation of local temperature will still be marked, the uterus and its appendages may be movable, and a tumor may or may not be clearly defined. Nature will now endeavor through the absorbents to remove the foreign material, and if properly aided by art with a fair constitution she can generally succeed. Under no circumstances should the patient be permitted to get up or even change her position in bed *unaided*; covering sufficient to protect her from the influence of cold, a spacious and well ventilated apartment, with absence of all excitement and freedom from company are indispensable. The vaginal injections are still to be continued but not so frequently as in the first stage, generally an injection night and morning will be sufficient to stimulate the blood-vessels to contraction, promote absorption and relieve pain, the one given at bed time usually acts as a sporic. Another important feature in the treatment to relieve pain and to promote absorption is counter-irritation; a blister six by eight inches should be applied over the hypogastrium avoiding in its application the groins, in order to prevent troublesome irritation. Its action can be hurried up by first applying for a short time, a mustard poultice prepared with vinegar; from six to eight hours will be time

sufficient for the blister to remain. The directions of Prof. Emmet are decidedly the most advisable of all the plans I have seen suggested; upon the removal of the blister, he at once applies a soft poultice covered with oil silk, protected by a flannel binder; removing poultice after a few hours, clipping the blebs, wiping the surface with sponge dipped in warm water slightly soaped; *when dried*, over the surface he places loose cotton of a superior quality, he resorts to this plan in order to husband the resources of the patient by rapidly healing the blister in from twenty-four to forty-eight hours, he gently removes all the cotton he can without resorting to force, and the rest he moistens with a sponge dipped in warm water slightly impregnated with carbolic acid. The surface of blister is then carefully dried and fresh cotton applied. This plan to be pursued daily, if any odor can be detected, or the patient complains of being uncomfortable. If necessary, he recommends another blister to be applied in from twelve to fourteen days. In this, the second stage, as in the first, we are frequently called upon to relieve pain with opium; we should be as sparing in its use as possible, remembering that it may be required for an indefinite length of time, and there is a condition brought about by its too free administration, which will prove anything but beneficial to the patient. Prolonged constipation, nausea and even persistent vomiting may be kept up by its too free administration, and general nutrition will not only be impaired by its injudicious use, but for the time being the appropriative powers of the system will be absolutely dormant. When given in moderate doses, and at sufficiently wide intervals by allaying pain, quieting nerve irritation, and overcoming reflected impressions, it may be said to act almost as a tonic, hold it in reserve, therefore, as long as possible; rely upon the local action of heat, in the way of vaginal injections and warm soothing applications to the hypogastrium to keep down pain and irritation, but when necessary, do not hesitate to resort to it by either rectal injections or suppositories, and in some rare cases, where great rectal irritation forbids the use of either of the above, hypodermic injections of morphia will prove of service. Alterative remedies such as the iodide and bromide of potassium, and the different preparations of mercury have been recommended. The iodide of potassium, if administered sufficiently often, say every fourth hour

in five grain doses in connection with some tonic as compound tincture of cinchona, I have no doubt in a certain number of cases would prove of service and is worthy of trial.

In regard to the bromide, as the former possesses superior sorbifacient powers, I take it for granted that this drug will rarely be required. An occasional mercurial, such as calomel administered for its peculiar effect upon the liver and portal system, it seems would be judicious; by thus unloading the portal circle, the pelvic congestion would be favorably acted upon, giving an impulse in the direction of recovery and by the cathartic effect of the drug, the *constipation for the time being would be overcome*, which generally proves so marked a source of irritation to the parts, and of annoyance to the patient. In its administration its specific effect is neither desired nor intended and should be studiously avoided.

Tonics of various kinds will prove of service; so of nutrient remedies; everything should be done for the purpose of sustaining the strength and husbanding the resources. The different preparations of cinchona bark, sulphate of quinine, the milder preparations of iron, cod liver oil, the various malt preparations, all will prove at times, when used judiciously, of advantage. The food should be concentrated and nutritious, fluid in form, so as to enable it to be appropriated, as fully as possible, leaving but little residue to collect and lodge in the rectum; milk, the animal essences, eggs, soft boiled or raw, are desirable. It is all important that the rectum be kept from becoming distended, as it is always more or less affected in this disease; either mechanically or reflectively, lodgment of feces generally takes place, and we should resort to such medicaments as have a tendency to overcome this condition of affairs. A mercurial cathartic every other day, preparations of senna, sulphur and cream of tartar, oxgall and other mild cathartics have all been recommended and tried with more or less success. Where flatulence exists, turpentine in small and repeated doses, assafoetida, preferably in capsules, will be found to afford relief. Scybala forming and impacting the rectum, are ingeniously removed in the manner suggested by Dr. Emmet, after injecting a few ounces of warm flax seed oil. He directs that the passage of the index finger in front of and beyond the mass, and then by using the force, downwards and backwards in the direction of the sacrum

the inflamed section is avoided, and thus the object is accomplished with least annoyance to the patient.

Having exhausted all the resources at our command and having failed to arrest the progress of the disease, we will suddenly be made aware of a more advanced and serious condition of affairs. The formation of pus and the commencement of abscess indicated by frequent rigors and decided fever of a hectic type : the pain which had probably subsided returns ; should pain, however, have existed throughout the disease, it becomes increased in intensity, the pus at first scattered in various directions, finally breaks down intervening tissue, and we have at last a distinct abscess with more or less definite outlines established.

The most guarded care should now be taken of the patient, every law of hygiene should be religiously and most scrupulously observed. Proper ventilation, a spacious apartment, with plenty of sun light, the requisite amount of clothing, properly prepared food, should all be attentively looked after, for unless the abscess quickly points, and obliteration of the sac speedily follows, we may look forward to a prolonged state of affairs in which the system is constantly being poisoned upon the one hand by the absorption of pus, and drained upon the other from the nutritive waste in the nature of a pyogenetic formation and discharge. Hectic fever, the measure of this physical disturbance must be looked after and controlled, for unless this be accomplished the patient must in the end succumb. So long as the thermometer shows moderate exacerbations in the afternoon and evening, we can have hope, provided the patient can retain the medicines and appropriate the nourishment administered to her, but if we have a steady high marking of the thermometer of  $105^{\circ}$  or higher, for a period of twenty-four or forty-eight hours, our prognosis should be of the gravest character. To control this fever and waste, we have a number of valuable remedies to which we can resort. Quinine, opium, digitalis, aconite, stimulants, etc. Remembering the rule laid down that quinia administered daily in large doses reduces temperature, arrests waste, and is an anti-pyogenetic, we should give it a full and fair trial. When cerebral disturbance exists, or where it is produced by this drug, we have at our command two remedies highly recommended by Dr. Emmet, bromide of potassium and hydrobromic acid. Prior to seeing his

article, I had frequently tried the former in many cases of fever, with infants as well as adults, where it became necessary to administer quinia, and I met with most gratifying results. With the latter I have no experience, but intend giving it a trial when an opportunity presents itself. Quinia should only be used to the point of reducing the temperature within reasonable limits, after that it can be continued with advantage in tonic doses, watching for a return of high temperature, when the former dose should be resumed. Where quinia fails to control the temperature, and the pulse remains rapid and feeble, powdered digitalis given in from ten to twenty grains within the twenty-four hours, will prove a valuable aid to the quinia in establishing a proper equilibrium. Opium, as in other stages, must be used when necessary to quiet pain, but as infrequently as possible. In alcohol we find a valuable auxiliary for giving strength to the pulse, reducing its rapidity, and in this way arresting tissue waste, when the vital powers are greatly depressed, it often proves invaluable, the quantity taken in twenty-four hours should be uniform, and determined by experiment with each patient. As a tonic and nutrient it is also valuable administered in small and infrequent doses in combination with other remedies, and proper nourishment.

Aconite is strongly recommended by Dr. Emmet where the vital powers have become impaired, and the action of the heart has been necessarily rendered more frequent from diminution of force. He considers this drug under these circumstances, as a heart tonic. So soon as fluctuation is discovered we should aspirate, in order to draw off all of the pus, thus relieving the parts of tension, subduing pain, and preventing the introduction of air, avoiding thereby a disposition to farther ulceration, or the increased and prolonged maintenance of the discharge; by permitting the walls of the abscess to come together the probabilities are strongly in favor of speedy termination of the disease.

Again, by aspirating early, we avoid to great extent, danger of the abscess rupturing into the peritoneal cavity; where *fluctuation* is detected, and we find it impossible to aspirate, the *abscess* should at once be opened in its most dependent part, by doing this we get rid of the present accumulation of pus, but introduce air, and for the time being increase the offensiveness and the quantity of the



discharge. Whenever an opening exists, either from natural or artificial interference, the cavity should daily be *washed out* by the physician with a rubber syringe, bent as may be necessary to adapt itself to the pelvic curvature, and the direction of the sac. Thorough washings should be given the sac with water containing Labarraque's solutions, carbolic acid, or any other desirable disinfectant. The nurse should in addition continue twice, daily, the use of hot water vaginal injections. Where the cavity does not appear to be diminished after a reasonable time, the physician should thoroughly cleanse it, and inject a solution of iodine, commencing with a dilute solution and gradually increasing its strength according to indications, avoid giving pain or producing disturbance in the parts, and you will keep within the proper limits in regard to the applications.

Should the patient recover she must be extremely guarded for several months, never allowing herself to become fatigued from exertion of any kind for fear of a relapse, and for some time, she should for the same reason confine herself to bed during her menstrual periods. Where the uterus is found to be in any manner displaced from the results of the disease, either by the contraction of adventitious material thrown out during the progress of the attack, or should the uterus have been displaced by the pressure of an abscess and so remained after the evacuation of its contents, provided local disturbance is being kept up, made manifest by pain and functional disturbance of neighboring organs, and when all active symptoms of the disease proper have subsided, those remedies, both mechanical and medical which are usually recommended, should be resorted to, in order to reëstablish the proper anatomical and functional relation of parts, and thus permit nature to move onward unobstructed in her course.

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F. E. Scanlin, Surgeon-Major A. M., M. D., Bengal, says of Re-vaccination: "On the subject of re-vaccination, it may be interesting to know that I have from time to time selected a number of men (whose re-vaccination had 'failed' after two or three operations) and performed the operation by raising a small blister about the size of a pea, and then vaccinated on the blistered surface. In each instance it has proved successful. The patients were, as a rule, men with thick coarse cuticle.—*British Medical Journal*.

# REPORT OF THE PROGRESS OF OPHTHALMOLOGY AND OTOLOGY.\*

By Dr. R. H. LEWIS, of Raleigh.

In making a report as Chairman of the Section on Ophthalmology and Otology, I must confess, that never having occupied a similar position before I am somewhat at a loss as to what, exactly, is expected of me. I suppose, however, that a short résumé of the recent progress in those departments of our science will be proper.

As a body of busy general practitioners can hardly be very much interested in the more obtruse questions appertaining to a special department, I shall not occupy their time (I doubt if I could obtain their attention) with the consideration of such subjects, for example, as "The Analytical Conditions of that Form of Astigmatic Pencil in which the two Focal Lines are Perpendicular each to the Axis of the Pencil, and also to each other, and the Correction of such Pencil by a Plano-cylindrical Lens" or the "Analysis of the Tones Included in the Secondary Noise of an Intermitting Tuning-Fork."

But it shall be my endeavor, in the brief report I propose making, to restrict myself, as much as possible, to subjects either of practical importance to the profession at large, or of more or less general scientific interest, and to avoid as far as may be, consistent with clearness, minute details which could only interest the specialist.

In the domain of anatomy the question which has probably attracted most attention of late among ophthalmologists, and which is of decided practical importance as bearing directly on the diagnosis of brain disease, is that of the decussation in the chiasm of the optic nerve fibres.

A number of men of standing have taken part in the discussion, some favoring the view of a total crossing, but none the old theory of a semi-decussation, until now it seems to have been pretty well settled, more, however, by clinical observations supported by post-mortem examinations than by actual dissection, in favor of the latter—certainly in man.

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\*Read before the 27th Annual Meeting of the Medical Society of North Carolina, held in Wilmington, N. C.

In ocular physiology the most striking event of the last decade was the discovery just ten years ago by Prof. Boll of the University of Rome of the retinal red, or purple as it is also called, which under the further investigations of Boll himself, Kühne, of Heidelberg, and others, has developed some interesting peculiarities. This retinal purple is, it seems, a fluid secreted probably by the layer of pigmented hexagonal epithelium, though by no means certainly, which is decolorized very rapidly by white light, and with less rapidity, varying according to the color, in colored light. Kühne found that a retina bleached in twelve minutes in violet light, and in twenty-five in green, while in red light the color lasted eight hours. Thirty seconds in bright sunlight has been found sufficient to produce the same result. In darkness, however, on the other hand, the purple, or erythroptine as it was named by Boll, is very quickly restored, even after death. Several observers have succeeded in taking optograms on the retinas of curarized rabbits and frogs, and Kühne claims to have succeeded very well with the eyes of oxen an hour after death.

These pictures were always on the outside of the retina, or, in other words, on that portion of the layer of rods which lies bathed in the purple. From these facts it seems not improbable that the true theory of vision is, that it is a photo-chemical process, instead of a physical one as assumed in the Young-Helmholtz theory, which supposes three sets of rods and cones each of which responds only the vibrations of one of the three primary colors, the secondary colors being the result of a united action on the part of two of these sets. While the photo-chemical theory cannot by any means be said to have been demonstrated, since there are many forcible objections to it (e. g., the fact that many birds have no retinal purple) into a consideration of which it would not be proper for me to enter here, I am nevertheless disposed to believe that it is a step in the right direction, and that with certain modifications it will be eventually, in all probability, established.

The theory of the perception of colors by the retina naturally suggests the subject of color-blindness, which, aside from its scientific interest is a subject of vital importance to the travelling public, inasmuch as their safety necessarily depends to a considerable extent upon the ability of railroad and steamboat officials to distinguish

accurately the colors of night signals. The subject has received a great deal of attention of late from many of the most prominent ophthalmologists on both sides of the Atlantic, and notably in this country, from Dr. B. Joy Jeffries, of Boston. The color-sense of tens of thousands of railway employes and school children has been tested, and the outcome of these numerous observations is, that while complete color-blindness, i. e., an inability to do more than distinguish white from black, undoubtedly exists, it is very rare; but that incomplete color-blindness, i. e., blindness to one of the three primary colors, is much more common. The statistics so far accumulated show that persons are most frequently blind to red and least so to violet, and that the defect is present in about four per cent. of males and one-fourth to one-third per cent. of females. This disparity between the sexes is significant as probably bearing upon the question of the education of the color-sense.

Cases of complete color-blindness are hopeless, but it appears that the color-sense may be considerably developed in those only partially affected by education and practice, and already in the larger and better managed public schools the practical study of colors forms a part of the curriculum in the primary department—particularly where the Kindergarten system is followed.

This peculiar deficiency is usually congenital, but a number of cases in which it was known to follow disease, not only of the nervous apparatus of the eye itself, but of other parts of the nervous system, as for instance, the spinal cord, show that it may be acquired. The cause is, of course, very obscure, and cannot be discovered until we learn how colors are perceived. There is undoubtedly more or less analogy between the color-sense and music-sense, and it has been supposed by some that a certain relation exists between color-blindness and a poor ear for music. Dr. S. M. Burnett, of Washington City, has noted the fact that there are comparatively few cases of this anomaly among the negroes, and he has likewise called attention in this connection to the well known fact that they have as a rule a remarkably "fine ear for melodies and also a love for brilliant colors." As he says, however, no investigations having been made in this direction we can as yet do nothing more than speculate.

A variety of ingenious tests for detecting color-blindness have

been devised, but the simplest and the one in most general use, is that of Prof. Holmgren, which consists in matching Berlin wools of different shades.

In ocular therapeutics the only recent remedies worthy of special mention in such an incomplete report as this must necessarily be, are eserine or physostigmine, pilocarpin, and duboisine.

Eserine has been long known and employed as a myotic simply, but it was very little, if at all, used in pathological conditions, so far as I know, until within the past three or four years, or since the discovery of its effect on the intra-ocular tension.

It has proven very beneficial in various corneal affections as keratitis, corneal abscess, ulcers of the cornea, phlyctenular troubles, &c., but it is upon its effect in glaucoma that its reputation chiefly rests, and it will be mentioned more at length in that connection further on.

Jaborandi is a drug with which every physician who reads at all must be more or less familiar from the multitude of reports upon its effect in various general diseases published in the journals for the past several years. It has been used too in eye-affections, and with considerable success.

The muriate of pilocarpin applied locally is, like eserine, a myotic and is equally efficacious in corneal disease; but it has never to my knowledge been observed to have any effect on glaucoma. According to the report of Dr. Laudesberg, of Philadelphia, in the *Archives of Ophthalmology* for May, 1879, of his experience with it, it seems to possess great value in a very intractable class of diseases. He found pilocarpin administered hypodermically specially useful as a sorbefacient in "intra-ocular hemorrhages and opacities of the vitreous and aqueous humors." He likewise experienced decided benefit from its exhibition in one case each, of partial atrophy of the optic nerve, optic neuritis, and retinitis albuminuria. It is certainly deserving of a more extended trial.

Duboisine, the active principle of the duboisia myopoides, an Australian tree, has recently come very prominently into notice as a substitute for atropia. It was first suggested about ten years ago by Dr. Tweedy, of London, showing, in inflammation of the conjunctiva, an idiosyncrasy for the latter drug. A number of eye-surgeons have lately published the result of their experiments with



it, and from the evidence so far, we may, I think, predict a brilliant future for it. It has very much the same effect as atropine, but is more powerful—a two grain solution dilating the pupil and paralyzing the accommodation more promptly than a four grain solution of the latter; and it does not seem to irritate the conjunctiva, but it remains to be seen after it has been used on something like as large a scale, whether it will not develop the same, or worse vices, than the belladonna preparation. One of the most valuable properties, especially in relation to its use for the correction of anomalies of refraction, is its evanescent effect as compared with atropia. Constitutional symptoms, to-wit: vertigo, drowsiness and a feeling of weakness in the knees have been observed to follow the liberal use of a solution of the strength of four grains to the ounce in several cases, but no fatal result has been chronicled. The chief drawback to its general use at present, is its cost, the wholesale price being one dollar a grain.

The subject of glaucoma, as some one has said, is one of perennial interest, and it is one of interest, not only to oculists, but to general practitioners as well, for every physician, not within reach of a specialist, will, at one time or another be called on to treat it. It is a disease whose pathology is very obscure, and it is on that very account that it has been, and remains, so fruitful a subject of discussion. Quite a number of theories as to its true nature have been advanced, but never has yet appeared sufficiently probable to obtain anything like universal support; though it is generally admitted, that the essence of disease lies in the increased intra-ocular tension and its consequences as most believe, cupping of the optic nerve. Now, as to the cause of this increased tension there are a variety of opinions, to only a few of the most prominent of which I can, in a general way, briefly allude.

Von Stellwag attributes it to a rigidity of the sclerotic, which permits its yielding to any increase in the intra-ocular humors; so that an amount of pressure, which in an eye with an elastic sclerotic would cause us trouble, would in an eye with a rigid one be pathological. He thinks that it is on this account that the disease is so much more common in old persons. According to A. Weber and Knies the increase of tension is due, not so much to rigidity of the sclerotic, as to an "impeded outlet, they holding that the natural

avenues of escape of the intra-ocular humors, which they believe to be situated at the outer angle of the anterior chamber in what is known as Fontana's space are dammed up by the contact of the ciliary border of the iris with the periphery of the cornea—that condition being generally found in glaucomatous eyes. This ingenious theory, however, has been successfully refuted by Schnabel, who has examined a number of eyes in which the cornea and iris were not only in apposition at their outer borders, but firmly united from inflammatory action, and Fontana's space was filled with inflammatory products, that had never exhibited any symptoms of glaucoma during life.

The view, which for a long while numbered most adherents, originated with Von Græfe, who believe the disease to be an inflammatory affection, a peculiar form of irido-choroiditis; but the inflammatory theory has, now, in the opinion of most ophthalmologists; been superseded by the neuropathic of Professor Donders. Donders thinks that glaucoma, or in other words, an increase to a pathological degree of the intra-ocular tension, finds its source not in an inflammation, nor in rigidity of the sclerotic, nor in an impeded outlet, but in a neurosis of the secretory nerves of the eye. Time and your patience would not permit me to give the various reasons in support of this view, but I will merely mention one very significant clinical fact to which a number of observers, including Stellwag and Græfe himself, have testified, and which, by the way was most beautifully shown in a case of tattooing of the cornea, reported by Hock, of Vienna, namely, that an irritation of the nerves of the cornea or the sensitive ciliary nerves will cause a glaucomatous increase in the ocular tension.

While we remain very much in the dark as to the pathology of this important disease, it is gratifying to be able to say that there have been some improvements in its treatment, which after all is the the practical question. From the time of its introduction by Von Græfe until a few years past, the only treatment known was iridectomy. Neither Græfe himself nor any one else could tell *why* iridectomy cured glaucoma, but such was the fact. The theory of DeWecker, of Paris, of the rationale of its action was that the relief to the tension was due, not so much to the removal of a piece of the iris, as to the cicatrix in the sclero-corneal junction, which,

being more porous than the surrounding tissues, allowed a filtration through it of the excess of humor. Acting upon this idea he tried the effect of making the section without excising any part of the iris at all, and he found the result the same. Sclerotomy is the name that has been given to the operation, and it is performed as follows: A knife is passed into the anterior chamber in the sclero-corneal junction, as near the iris as is compatible with safety to the ciliary body, and brought out at a corresponding point on the other side, and the section is then made entirely in the junction, in a plain parallel with the iris, as if for the formation of a flap, but it is not quite completed, a narrow bridge of tissue being left. The sum of the two sections thus made should be equal, it is said, to that in a large iridectomy. This operation has now been done in many cases and generally with very good results, and is favorably regarded by a number of distinguished surgeons; but being difficult of performance, even by the most skilful, and very liable to be followed by prolapse of the iris, it is not recommended by most of its advocates, including Wecker himself, as a substitute for iridectomy in all cases, but only in the absolute and hemorrhagic forms of glaucoma, in which the latter is very apt to fail. Wecker has also suggested, and practiced successfully in the absolute form, drainage of the eye by means of a gold wire passed through the globe; but it has been known to cause sympathetic ophthalmia in at least one case, and, being in no wise superior to other and safer methods, it will probably gain much favor.

Previous to 1876 no remedy for glaucoma short of the knife was known, but in that year Prof. Laqueur, of Strasburg, induced by a knowledge of the fact that atropia would sometimes bring on an acute attack of that disease in eyes predisposed to it, (a fact now thoroughly established—Schnabel once saw an attack of acute glaucoma excited by the instillation of one drop of an atropia solution of the strength of one-fifth of a grain to the ounce), and by the well known antagonism between atropine and eserine in their effects upon the pupil and the accommodation, resolved to ascertain if they were equally antagonistic in their effects upon the intra-ocular tension. The result of his experiments with eserine in six cases of glaucoma was, that it invariably reduced the pathological increase of tension. Since then his experiments have been repeated and generally confirmed by a great many observers.

At one time it was hoped that the problem had been practically solved and the dreaded disease robbed of its terrors, but further investigations have shown that hope to have been to a considerable extent delusive. As the conclusions of Prof. Knapp, as set forth by him in a communication in Vol. VII of the Arch. of O and O. "On the Action of Eserine in Glaucoma" quite accurately express the opinion at present prevailing on this subject, I will take the liberty of quoting him: "Thus far," he says, "I can only assert that eserine cures acute glaucoma permanently in exceptional cases: in the others it produces a temporary improvement, by which the patient may be beneficially prepared for the operation. In sub-acute glaucoma its effect is doubtful, and in chronic glaucoma, with or without sub-acute exacerbations, the remedy either has no effect at all or is injurious."

I have only used it once myself, and that was in a case of acute glaucoma living some distance in the country, which I was asked to see for a brother practitioner. I never saw the patient again but I was informed by him that she was relieved of the pain in great part and that vision which had been reduced to a mere perception of light was greatly improved within 24 hours. From what has been said it is clear that every country practitioner should carry a small quantity of this drug in his medicine chest or saddle bags for while it is by no means a specific he may, nevertheless, be able with its assistance to tide his patient over an attack and save the eye until he can either do the iridectomy himself or send him to a specialist.

In the operative surgery of the eye there have been some advances made. To mention only the most important I would in addition to sclerotomy for glaucoma mentioned above like to call attention for a moment to an operation which while it cannot be said to be particularly new has only quite recently come into general notice. I refer to optico-ciliary neurotomy which is well described by its name and which is intended as a substitute for enucleation in those cases of threatened sympathetic ophthalmia where the injured eye retains a sufficient amount of good looks to make its retention desirable. It has been done quite a number of times by various oculists principally by Schöler, Hirschberg and Schweigger, of Berlin in Europe, and Chisolm and Knapp in this country. There appears

to be some difference of opinion as to who deserves the credit of originating and first performing it but the idea undoubtedly had its birth in the fertile brain of Von Græfe and according to his authority it was first carried into execution by Dr. A. Weber, of Darmstadt, some fifteen years ago.

The operation is performed in the following manner : The tendon of the internal or external rectus (but why *external* rectus I must say with Prof. Knapp I cannot well understand as the optic nerve is harder to reach and the insertions of the oblique muscles are in the way on the outer side) is divided the tissues are dissected up from the posterior half of the globe, the optic nerve is cut with blunt pointed curved scissors, and rotating the ball forcibly inward or outward as the opposite muscle was severed with toothed forceps or a small sharp hook as preferred by Schweigger and Knapp any fibres that may remain are divided. The muscle is then advanced and united by sutures with the strip of conjunctiva left near the corneal border for the purpose ; and the operation is concluded by covering the closed eye with charpie or cotton and bandaging it rather firmly. There is always more or less prominence of the globe afterwards from effused blood and swelling behind it but that speedily subsides and in favorable cases the patient may be discharged in a week or ten days. It is nearly always successful though some squint generally remains and I have read of one's eye having been lost from suppuration.

Having removed tumors from the optic nerve and done one neurotomy very successfully without dividing any muscle Knapp advises a return to the original method suggested by Boucheron and others and the omission of the tenotomy as unnecessary and harmful. If the operation be properly done, and complete insensibility of the cornea is evidence of it, the ciliary nerves which pierce the sclerotic around the optic nerve entrance must be divided, and as they are the conductors of the morbid influence in sympathetic ophthalmia it is plain that the object of enucleation in those cases may be obtained without removing the eye and while the eye must ever remain perfectly sightless, it is nevertheless looked at from a cosmetic stand-point certainly an improvement on the latter.

For the removal of hard cataract the modified linear operation of Von Græfe remains by long odds the favorite.



In my opinion it has not been improved upon except probably in the method of opening the capsule which has been recently followed by Knapp in 72 cases in 67 of which the result was good, in one moderate, and in four the operation failed. Instead of lacerating the capsule freely and rather indiscriminately so to speak in its central portion as is the general custom he makes with a very sharp cystotome a clean cut incision in it near its periphery in the line of the corneal section. In some cases he enlarged the opening, by making an incision in the capsule from its centre to the middle of the horizontal opening thus making a T incision, but he did not think that of special benefit and discarded it. In a preliminary communication on Peripheral Division of the Capsule in Vol. VI, of the Arch. of O. and O. he sums up its advantages as follows: "1. Simplification of the operative procedure. 2. The operative manipulation is less liable to do injury. 3. The rapid healing of the linear wound of the capsule confines whatever remains behind within a closed cavity thus placing an eye from which a cataract has been removed in conditions akin to those which follow a simple iridectomy" which last he considers the chief advantage of the peripheral capsulotomy. Its only disadvantage as compared with other methods is the fact that many cases require subsequent division of the capsule though it is likewise a fact that many cases no matter how the capsule is opened require a second operation and as the method is as yet comparatively in its infancy it is impossible now to judge it fairly in that respect.

#### OTOLOGY.

The progress in this department, I regret to say, has not been so marked as is ophthalmology, and unfortunately this is particularly the case as regards the more common diseases of the ear in which we are all specially interested. There being, therefore, very little of a practical nature to report and having no doubt already wearied your patience, I will content myself with alluding very briefly to two or three matters of some general interest.

A uniform and satisfactory hearing test has always been a desideratum with aurists. It has recently found its fulfilment, as far probably as such fulfilment is possible, in the invention by Dr. Politzer of his Aconimeter. This little instrument is very simple in its construction being composed of a steel bar tuned to a certain

tone which is struck by a steel hammer that moves through a given space. Being simple, compact and inexpensive, and moreover, adapted for an examination of both ærial and bone conduction it has received a cordial endorsement from aurists generally, and no doubt will come into universal use as the accepted standard.

In a late number of the *American Journal of Medical Sciences*, Dr. Samuel Sexton calls attention to an apparent connection between affections of the teeth and ears. His observations go to prove that there really is such a connection of a reflex character. He thinks artificial teeth on rubber plates peculiarly liable to irritate the gums and to bring on these reflex ear-troubles. This is new ground so far as I know and deserves cultivation.

When Mr. Rhodes, of Chicago, invented his audiphone it created a great sensation, there being some account of it in nearly every newspaper at that time and the most extravagant hopes were excited in the minds of the very deaf—to be alas! in great part disappointed. The theory upon which this instrument as well as the folding dentaphone is based, is the condensation of sound vibrations by a thin elastic plate of hard rubber or other suitable material rendered tense by cords in the audiphone and by pressure with the hand in the folding dentaphone, the transmission of these vibrations to the cranial bones through the upper teeth in contact with which the upper edge of the fan-shaped instrument is placed; and the conduction of them through the cranial bones to the auditory nerve. The theory, the essential part of which, namely, the conduction of sound by the bones of the head has long been known, and which implies a healthy condition of the auditory nerve is correct enough and there is no doubt that the hearing of persons very deaf from middle-ear disease is improved by the instrument but not to the extent that was at first anticipated. Dr. Charles S. Turnbull has seen “several markedly successful cases of its application”, but thinks, nevertheless, that it has been overestimated; and the observations of Dr. Knapp in a comparison between the audiphone and an ordinary cup-shaped ear-trumpet with a parabolic bottom published in the last number of the *Arch. of Otology*, prove that while osteophones, which term includes all instruments designed for bone conduction of sound, will improve the hearing in many cases, they are not equal to the old-fashioned instrument referred to, the

trumpet giving better results in every one of the 14 cases of which he made notes. To some persons words spoken in a trumpet are exceedingly unpleasant and to that very small class of patients he thinks the audiphone will prove more valuable than the trumpet. It is not applicable to cases of partial deafness because the sound waves being conducted to the auditory apparatus by the different routes and not arriving at exactly the same time nor with the intensity produce great confusion. Osteophones, it seems, therefore, have sadly disappointed expectation but they undoubtedly have possibilities and being very recent inventions, there is no telling yet to what extent they may be developed.

## PELVIC CELLULITIS AND PERITONITIS, ABSCESS—RETRO-FLEXION, STENOSIS, STERILITY, PROLAPSE OF THE OVARIES.

A Clinical Lecture Delivered at the Hospital of the University of Pennsylvania, April 28th, 1880.

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Reported by WM. H. MORRISON, M. D., for the NORTH CAROLINA MEDICAL JOURNAL.

### PELVIC CELLULITIS AND PERITONITIS, ABSCESS.

GENTLEMEN:—This lady has been sent to us by a physician. She is 33 years old, has had four children, the youngest two years old, and five miscarriages. Now this point strikes me immediately. last summer she was in bed from June 28th, until the middle of September with what was termed pelvic inflammation. This passed on to suppuration and the abscess opened into the rectum. The discharge still continues and she has lost flesh rapidly.

Now let me first find out about these five miscarriages. I ask her if they were honest miscarriages, and she assures me that they were. I feel that with five miscarriages there must be something wrong. The first child was still-born, then followed three consecutive

miscarriages. She says that the first labor was a hard one, but not an instrumental one. This would lead me to think that some lesion had occurred, which prevented the wound from keeping the fœtus in to term, laceration, or sabinvolution which sometimes causes abortion.

I ask her if the discharge of pus was accompanied by dysenteric symptoms, she says it was. If the abscess had opened into the small intestine, the pus would have passed through the bowel without causing any irritation; but when the opening is further down in the rectum, it causes symptoms of dysentery, frequent and scanty stools.

In examining this woman, I must be very careful, for a woman who has had a pelvic abscess, especially if it is in the suppurative stage, is very vulnerable, and what will cause no trouble in a woman in good health will in her, often be followed by severe inflammation.

I find the womb fixed in the pelvic cavity, I cannot move it in any direction and I know if I attempt to do so I shall give her pain. She has had pelvic cellulitis or peritonitis, or what is more likely, both, for it is very rare that we have one without having the other. A favorite illustration of mine and one that I think applies well in speaking of this subject, is that the womb is like a ship, swinging at anchor, moving with every current and motion of the water. A hard frost comes at night, the water is frozen and then the ship is immovably fixed in its bed of ice. The womb is like the ship, moving with every motion of inspiration and expiration and every motion of the body. The frost at night has come and these inflammatory deposits have been thrown out freezing the womb in the pelvis. But the fixity is not like that of ice, it is more like that of tallow, and it feels as though it could be indented by the finger. I feel over the pubes, but I do not feel any tumor, except the top of the womb. I now pass my finger into the rectum to see if I can detect any opening there, and I can feel nothing but inflammatory deposits all around.

I shall not use the sound here nor pursue my observations further, for I have learned enough to enable me to come to a conclusion. I shall now have her taken out.

I asked her, gentlemen, if her miscarriages were honest ones and she said they were. I do not believe that they were. It is such

a shockingly prevalent crime in this country, and for the matter of that, all over the world, that I cannot believe that her statement is a correct one. I asked her another question. I asked her if she had used measures to prevent conception. She answered "not lately;" giving me to understand that she had done so sometime ago.

Criminal abortion is a very common cause of pelvic cellulitis and peritonitis, so common that when I am called to a case of pelvic cellulitis I take it for granted, that if there is no history to the contrary, that it is the result of preventive measures or criminal abortion.

The most common cause is the employment of preventive measures. What are the preventive measures that will cause pelvic peritonitis? The injection of fluids into the vagina directly after coition, astringent or other fluids. In the second place, it is criminal abortion, and thirdly, it is honest miscarriage, but this rarely causes pelvic peritonitis.

There are other causes, taking cold during menstruation. A woman during menstruation, throws cold water into the vagina to stop the flow, as she wants to go to a ball, or a woman while menstruating stands on a damp floor. Sometimes we have it from regurgitation of the blood, in cases of anti-flexion sometime in retro-flexion. The womb is occluded by the bend. It becomes distended and the blood passes through the potent Fallopian tubes causing peritonitis.

The symptoms of an attack of pelvic peritonitis are, first a chill, followed by high fever with great tenderness. The woman lies with her knees drawn up, as in an attack of peritonitis. The temperature is from 102° to 103°. The pulse never under 120 per minute.

The treatment of the acute stage is large poultices to the abdomen, and I like to give large doses of quinia, 10 grains three or four times a day until cinchonism is produced. Enough morphia should be given to relieve the pain. Sometimes a hypodermic of morphia will arrest the disease if used at the onset. After the violence of the fever has been subdued, blisters are often very useful.

Before continuing the subject of treatment, let me say a few more words in regard to the diagnosis. A woman is seized with this pain and fever. If you examine the vagina, you will find it very hot, and the womb tender especially on any motion. After a few days



you will feel a hardness around the womb and above the pubes, due to the deposit of plasma in the broad ligaments and surrounding tissues.

When the febrile action has subsided, you begin with blisters which are the remedies par excelentia. Blisters 4x2 or 4x3 and repeated. During this time you give tonics. I do not give iron, because my experience is, that iron causes blood to go to the womb. I give the chloride of ammonium and also the bichloride of mercury. The bichloride of mercury commencing with gr. one twenty-fourth, increasing to the gr. one-twelfth.

It is well to know some way of disguising the chloride of ammonium, as it has a disagreeable taste. I use three methods. I either give it in the form of five gr. compressed pills, or with an equal quantity of the powdered extract of liquorice, the syrup of liquorice may be used ; or it may be given in cinnamon water and a little plain water added when taking it.

Where an abscess forms and points, it is right to open that abscess. Abscesses point not frequently in the vagina, next in the rectum, thirdly in the bladder, a very bad place, and lastly at Poupart's ligament. After the abscess has opened, the next thing is to try to close it.

When, as here, the opening is high in the rectum, the best plan is rest and good tonics. Here iron may be given and with it, the bichloride of mercury. The tincture of the chloride of iron may be given in m. x doses and gr. one-twenty-fourth doses of bichloride mercury. The time for blisters is now past. These are bad cases and when such an abscess heals, it is, if I may be permitted to use the words and I use them in no profane sense, I would say, as the Arabian physician said, when asked why labor comes on at the end of nine months ; "it is by the grace of God." When an abscess open into the rectum so high up the physician is powerless and if it heals it is by the grace of God. All that man can do is to build up the constitution, hoping that the abscess will grow smaller and smaller. These are cases where you can give no satisfactory prognosis.

Now as to the frequency of abscess following pelvic cellulitis. I can recollect no case of abscess in my practice following pelvic inflammation, when the case was under my care from the beginning.

I have always found one of two things occurring, either the inflammation was so severe that it soon passed into a general peritonitis and followed by death ; or else the use of the remedies I have mentioned was followed by recovery.

#### RETRO-FLEXION, STENOSIS, STERILITY.

We have a patient here who has come a great many miles to consult us. She has been married 17 years, but has had no children. She has had troublesome dysmenorrhœa, which is getting worse. I have not yet examined her, but shall do so now. I find the cervix of a virgin or rather of one who has never borne children. The os is small. I must now examine with the sound. The idea that passes through my mind as I read the history that she has been married 17 years and has had no children and has severe pain, is that there is here some impediment. It is usually some mechanical impediment either a flexion or a stenosis, i. e., actual narrowing of the canal.

In a woman who has never borne children, the obstruction is generally due to anti-flexion. The natural condition of the womb being ante-flexion, and congenital deformity tends to increase this natural bend. If a woman who has borne children has dysmenorrhœa, it is usually due to retro-flexion. In such cases the flexion is generally induced by subinvolution. The womb is enlarged and heavy and topples over in the direction of least resistance and that is towards Douglass' pouch, for the bladder containing more or less urine prevents ante-flexion. Now there are exceptions to these rules, and you sometimes will find ante-flexion in a woman who has borne children and retro-flexion in those who have not.

The womb feels as though it was retroflexed in this case. This is one of those wombs that you occasionally meet with, which lie in every direction. It is now in a state of sinistro-lateral flexion ; but when I bend the sound a little more, it shows that the womb is retroflexed.

The sound passes in easily. Can we have stenosis in such cases ? You may have from the bend in the neck. As we have her under ether, I shall proceed to dilate the cervix. If she were not etherized, I should introduce a pessary. We shall use a pessary after the dilatation. The womb measures a trifle over 2.5th inches. I should have expected to find a larger measurement. I do not find

any prolapse of the ovary, but I can feel the angular flexion in the neck of the womb. I think I feel a small fibroid tumor at the junction of the neck, but I am not sure of that. I am using the curette to see if there are any vegetation of the lining membrane and since she is under ether there is no harm in making this examination and giving her a chance of becoming pregnant. I only find two or three.

Of course it is a good proof of stenosis if you cannot get the sound in, but in some cases stenosis of you can get the sound in without difficulty. At each monthly period, the mucous membrane becomes congested and swollen and occludes the canal, or we may have a membrane preventing the escape of the monthly flow, and causing severe pain.

A lady came to see me to-day and brought with her a bottle containing a membrane which she passes at her monthlies, and which gave her great pain. We call this disease membranous dysmenorrhœa. It is an exceedingly difficult disease to cure, but it is often cured by the use of the curette and the use of applications between the monthlies and indeed, sometimes during the monthlies.

I pass the dilator in until it touches the fundus and then withdraw it half an inch. I turn the womb into state of ante-flexion and dilate. I shall leave the dilator in until she begins to squirm, that will be in about fifteen minutes; but I will not take up time by keeping her here, but I shall send her out and have the next case brought in.

#### PROLAPSE OF THE OVARIES.

This case is brought here for diagnosis. I have not seen her yet. I shall read you her history. Puberty came on at 11½ years. She has had two miscarriages one of which was a criminal abortion. She was married at sixteen, and after ten months, had a miscarriage at five months. This was probably the criminal one. She has been married twelve years. Five years ago she had a miscarriage at two months. She has always had severe dysmenorrhœa. Her menses have been very irregular. She menstruated only three times last year, lasting each time eight days. She now has metrorrhagia. She has hysterical attacks every four or six weeks. She has difficulty in passing water and in defecation. She complains of cutting pains in the iliac region and about the umbilicus and severe pain at the sacrum.

Here we have a number of symptoms which would lead to the idea that we had a great deal of trouble in the womb. I am disposed to date all her troubles from that miscarriage.

There has been some lesion produced at that time, which has been the foundation upon which all her other trouble have been built.

On a vaginal examination I find, in the first place great tenderness and on the right side I feel a lump. That lump is not hard. It is elastic. It either contains fluid or else is an ovary. I am going to press my finger on it, just as a boy at school presses a cherry stone between his finger and the desk and sends it flying across the room. If it is an ovary I shall cause a severe pain, just as you have felt pain from pressure over a portion of your body. You see that I give her great pain. This is plainly to my mind an ovary because there is no other organ so tender as that. It is a little enlarged. We have here, I think, without any doubt, prolapse of the right ovary.

I shall now try to examine through the abdominal walls. This woman is nervous and makes her muscles so tight that I can do nothing. It requires a great deal of tact to make an examination of this kind. In examining a woman in this way, tell her not to look at me, and then take a long breath and expell it slowly. Her mind being occupied with the breathing, your hand can follow the sinking abdominal walls without any trouble.

I think that the left ovary is also prolapsed. The next thing is to find out which way this womb lies. The womb is turned over backwards, and the sound passes to a trifle over 2-5th inches. The ovary is movable for I can push it up. It feels as though it contained fluid, but ordinarily, an ovarian cyst does not cause pain.

Now comes up the important question of treatment. We have here a retro-flexion. Shall I put a pessary in? It would be simply foolish, ridiculous, for me to put a pessary into a vagina so tender as this one is.

Before going on, let me wash my hands, for I do not like to have them in this condition long, after examining women of whom I know nothing. A short time ago a friend of mine who has a large practice, got specific disease from making an examination and that is the fifth friend who has gotten into the same scrape. He had it pretty badly and lost his hair and beard; but that is a small matter compared to the constitutional impregnation.

Let us now go back to our patient. She cannot bear a pessary. The proper plan is to put her to bed and give her some medicines by the mouth that shall diminish the congestion of these organs. I should begin by giving her some saline mineral water, as the Hunyadi water or Rochelle salts, and have the bowels moved two or three times a day. I should be tempted in some cases to apply leeches to the neck or employ scarification. The latter in these cases, will sometimes cause great pain.

Having gotten the bowels in a soluble condition, the next medicine that I should give is bromide of potassium in gr. xx doses three times a day. After the congestion and irritability is lessened, I should begin to give certain remedies. I dare not call them specifics, but which are often very efficient in these cases. I should, perhaps, begin with the bichloride of mercury gr. one-twenty-fourth to gr. one-twelfth. I should combine with this the chloride of ammonium, which often acts like a charm in glandular enlargements.

When I find that these have lost their effect, I then give a medicine that I often give in cases where the inflammation is not as high as in this, that is, the chloride of gold and sodium given in doses of one-eighth of a grain three times a day. I take five grains and make forty pills. I give one pill three times a day and increase to two pills three times a day. I have given three pills three times a day, but this is apt to cause some intestinal disturbance. In such cases I sometimes combine with it, a little opium. This is an excellent remedy, but like everything else, it will sometimes fail.

This woman must also be taught the knee-breast posture. After the irritation is relieved, then we shall try a pessary. No definite rules can be laid down as to what pessary should be used. We may have to commence with a pessary of oakum, or a ring or with some of the soft rubber pessaries.

What is the knee-breast posture? The woman having nothing on but her night dress, gets on her knees and separates them about ten inches. She then places her head on one hand so that her breast touches the floor. She then, with the other hand, opens the vulva, the air rushes in and pushes all the organs towards the brim of the pelvis.

What causes this? You have seen a tumbler filled with water over which a card board had been placed, inverted without the



water falling out. The pressure of the atmosphere keeps it in ; but suppose there was a hole in the bottom of the tumbler, over which I had my finger and I removed my finger, the air would instantly rush in and the water would run out.

When the woman gets into this position, we have a reversal of gravity and the womb is trying to get out, I may say aspiring to get out of the pelvis, but the atmospheric pressure on the abdominal walls prevents it. Now let that woman open the vulva the air rushes in and carries the womb down.

Sometimes the woman when in the knee-breast posture cannot open the vulva with her hand. In such cases, I tell her to take an old-fashioned uterine syringe remove the piston and pass the syringe into the valve before assuming the knee-breast posture.

I tell the woman that although she is successful she may not hear the air rush in, but she will hear it as it comes out. After having been in this position I direct her to lie on her side for a while and then on her back. By doing this two or three times a day a great deal of good will be done.

Now one more word. My experience leads me to think that cases of prolapse of the ovary occur most frequently in girls who are abusing themselves, which I am happy to say is comparatively rare and in women who are trying to avoid conception. So that, when I have a case of prolapsed ovary, my suspicions are always aroused and in married women, I always ask if preventive measures have been used, but in unmarried girls, I rarely ask any questions although I have done so.

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The Paris correspondent of the *Daily News* notes, in reference to M. Gambetta having been ordered by his physician to leave off smoking, that all the tough old Frenchmen still in the enjoyment of unimpaired mental faculties never smoked. M. Dufaure, M. Barthélemy St. Hilaire, Victor Hugo, M. Etienne Arago (brother of the astronomer), belong to the non-smoking school of public men. So did M. Thiers, M. Guizot, M. Crémieux, M. Raspail, and the octogenarian Comte Benoit d'Azy, who lately died in full possession of his mental faculties.

## EDITORIAL.

### NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED  
IN WILMINGTON, N. C.

M. J. DEROSSET, M. D.,  
THOMAS F. WOOD, M. D., Wilmington, N. C. } Editors.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to our JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to DEROSSET & WOOD, P. O. Box 535, Wilmington, N. C.*

### REFLECTIONS ON THE TWENTY-SEVENTH MEETING OF THE MEDICAL SOCIETY OF NORTH CAROLINA.

The approaching meeting of the State Medical Society, brings always to its friends, an earnest solicitude about the amount of preparation which has been made for work. For this Society is essentially a working body, having upon its shoulders grave responsibilities imposed by the law of the State, to say nothing of the individual obligation of members.

In no State, as far as we are aware, has the Medical Society undertaken so much.

First, in order to elevate the standard of medical proficiency, the Board of Medical Examiners was organized. This body lies at the foundation of all successful society work. The license from this Board determining whether or not a physician is competent to practice, or to serve as a member of the State and County Board of Health, and of the State Medical Society. The duties of the Examiners therefore, when the class for examination numbers thirty-three as at this meeting, is very great, consuming all their time during the session and for the day previous.

It is the decision of this body that the profession, in and out of the Society looks with so much interest. It is to this body that the State Society gives its unqualified endorsement and support.

At the last meeting, the candidates for license numbered 33 of whom seven were adjudged unworthy. Some of these had been practitioners for years, others were fresh from college. We believe that with a few exceptions, the Board of Examiners could not perceive that the higher standard aimed at by the medical colleges had made its impression, as yet. At least a part of the Board was satisfied that if the teaching body and the licensing body had been separate when many of these candidates came up for their diplomas, the work of the Board would have been greatly lightened.

Second, the Board of Health of North Carolina is an organization having its origin in the State Medical Society. The authority of this Board, although limited by defective laws, ramifies first throughout the State, and brings into communication the entire medical profession as far as they are eligible. The test of eligibility as mentioned before, being the license of the Board of Medical Examiners. The report of the Secretary did not show much advance in the work of State Medicine. But since the adjournment there have been substantial indications of renewed interest. There is no doubt that this work is destined to overshadow all other work undertaken by the State Medical Society.

Lastly, the professional literary work done by the Society is to be examined. The very first thing that strikes us is, that out of the six sections, there were only reports from the Section on Ophthalmology and Otology, and Obstetrics and Gynæcology, and the Chairman of only one of these Sections was present to read his report. This was disappointing to all interested, for the work had been so wisely—apparently—awarded to industrious men, that failure was not thought of in this connection. We do not believe any more promising subdivision of work could be devised than that of sections, and we think that gentlemen who get these appointments and see any reasonable ground of doubt about doing the work allotted to them, should say so frankly, and give time for other appointments. No matured section report can be presented without the work is commenced as soon as the Society adjourns and is kept up for the year.

Of clinical reports there was great paucity. Not because no reports had been brought to the meeting, but because there seemed to be no way of bringing them out. And right here we would suggest that at the next meeting a committee on business be appointed at the opening session, whose duties shall be to receive papers prepared for the Society, and arrange the hour of their presentation. The same committee could very profitably exercise a censorship, and exclude undesirable communications.

Upon the whole this meeting was an improvement over its predecessor, but we cannot go so far as to say that it was what it should be. Our standard should be made progressively higher, instead of contenting ourselves with an easy mediocrity.

Let us hope then that section-work will be begun in earnest from the day of adjournment until the day of meeting. In this each member of the Society can and should lend a helping hand, as the design of the Society seems to be to make the chairman only the collator and reporter, receiving and digesting the material brought to him by interested investigators.

Notwithstanding we have spoken in some degree adversely of this meeting, we do so only because our standard is high. We are nevertheless aware that the influence of this body is greatly gaining ground all over the State. We know that more active work is being done in all departments than ever before, and we know that the profession is prepared for an increasingly higher standard of scholarship, and we hope it will not be forgotten in this connection that much of this improvement is due to the cohesive power of our auxiliary bodies in the intervals of Society meetings.

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## THE EDGECOMBE ASSOCIATION'S PROPOSITION FOR REGULATION OF THE PRACTICE OF MEDICINE.

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The proposition\* sent up from the Edgecombe County Medical Association to change the law of the Board of Examiners so that it shall read: "Any person proven guilty of violating [the law of

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\*North Carolina Medical Journal, May, 1880, page 325.

the Board of Examiners, see public laws], shall be guilty of a misdemeanor, to be furnished by a fine of \$50., or imprisonment for not more than three months."

The proposition also extends to the licensing of druggists, according to the regulations governing the licensing of physicians, in a manner to be decided upon.

We are confident that the best men in the medical and pharmacal professions will heartily endorse this movement, and will take pains to instruct their representatives in the next Legislature to vote for such a law. We do not adhere to any form of law which will carry out the object, we only hope that a simultaneous move will be made all over the State, and that the State of North Carolina will be rid of the burden of supporting so many irregular doctors and quacks. Other States are moving and we must purge ourselves, and give the people some protection against the overflow of quacks which the more stringent laws of other States may send down upon us.

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## PERMANENT PLACE OF MEETING OF THE STATE MEDICAL SOCIETY.

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CHAPEL HILL, N. C., May 22d, 1880.

*Editors of the North Carolina Medical Journal:*

Would it not be well for the interests of the State Medical Society, as for the State at large, that the Society should have a fixed and permanent place of meeting, instead of the now, as it appears to me, rather undignified plan of going each year from place to place?

Could not some central point be selected where we could meet every year in order to establish a library and museum for the benefit of the profession?

The capital of the State, Raleigh, or the seat of the State University, Chapel Hill, would either of them be sufficiently central to meet the wants of a large number, perhaps, majority, of the profession.

Respectfully,

W. P. MALLETT, M. D.

[We have heard this matter discussed from time to time, and the proposition is in some respects desirable to adopt. If this State were



traversed by a net-work of railroads, making the central points of the State of as easy of access as any other, we should consider the proposition favorably, and try to have it adopted. As the matter now stands, Dr. Mallett's proposition cannot be agreed to.

A very large portion of the Western counties are not traversed by railroads. In the west the population is scattered, there are no large towns but Asheville, and there is little money in circulation. The gentlemen of the west have fewer facilities to come to us than we have to go to them. The law makes the meetings of the Board of Examiners take place at the time and place of the meeting of the State Society, and it is necessary that facilities should be afforded the physicians of the Western counties to obtain the license of the Board. For these good reasons the Society should pursue its itinerancy until the mass of the profession is properly enrolled in the Society.

Had it not been for this itinerancy, there would have been no such vigorous membership as we now have. Many of our best members were only aroused to work, by having the session of the Society in their vicinity. Many more will be enlisted year by year by this means, and when we have gained sufficient strength, we should commence by having alternate sessions in Raleigh.

But this is all in the future, and if gentlemen will go patiently along and help the Society year by year, they will see the wisdom of the policy so far pursued.—EDITOR.]

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#### KENTUCKY POISON BILL.

We congratulate the physicians and druggists of Kentucky that they have a law against the unrestricted sale of poisons. Such a law, in addition to the good it will do in lessening the sale of poisons accidentally or criminally, could be made the means of restricting the sale of opium and its preparations, and thereby stay the rapidly increasing sales of opium to opium-eaters.

The North Carolina Medical Society proposed a similar bill to the Legislature in 1870, but it was mercilessly killed. Let us try again.

## REVIEWS AND BOOK NOTICES.

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TRANSACTIONS OF THE NEW YORK PATHOLOGICAL SOCIETY.  
Volume three. Edited by JOHN C. PETERS, M. D. President  
of the New York Pathological Society, &c., &c. New York :  
Published for the Society by Wm. Wood & Co. 1879. Pp. 335.

It is a real pleasure to sit down to the perusal of this volume. Like its predecessors, it sustains a high standard of excellence, both as to the matter and manner of the reports. What most general practitioners want in their every day reading is instruction based upon actual clinical observation and pathological examination, and these requisites are found in these reports.

The volume opens with diseases of the organs of digestion, giving 14 cases of hydatids of the liver, with notes by the editor on the subject.

Cancer of the liver, melanosis of the liver, atrophy of the liver and other diseases of the liver are illustrated by cases. Herniæ, diseases of the kidneys, diseases of the bladder, diseases of the Fallopian tubes and uterus. Lastly, an appendix on carcinoma by Dr. Thomas E. Satterthwaite.

Our readers could not do better than study these reports with a view not only of instruction, but as models of concise and truthful description.

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PHARMACOGRAPHIA. A History of the Principal Drugs of Vegetable Origin, met with in Great Britain and British India. By FRIEDRICH A. FLÜCKIGER, Ph. D. Professor in the University of Strassburg, and DANIEL HANBURY, F. R. S., Fellow of the Linean and Chemical Societies of London. Second Edition. London : Macmillan & Co. 1879. Pp. 800.

The name given to this volume the authors "selected not without due consideration, as in itself distinctive, easily quoted, and intelligible in many languages." The volume purports to be and is "a record of personal researches on the principal drugs derived from the vegetable kingdom, together with such results of an important character as have been obtained by the numerous workers on *Materia Medica* in Europe, India and America." Both Pharmacy and

Therapeutics have been omitted under the description of various substances considered. The present edition—the second,—is enhanced in value by the aid given by Professor Charles Rice, of New York, to whom Dr. Flückiger the surviving author makes due acknowledgement in his preface.

After a careful examination of this volume we are satisfied that it successfully occupies the field of pharmacography in a manner without parallel.

The medical and pharmacal student will look in vain in other volumes for what they will find well described and clearly stated in this work. We could point out many articles interesting to our readers.

One might look in vain for an article on pea-nut oil (*oleum arachis*) in any systematic treatise. But here we find the botanical name of the plant yielding the oil; the common names in use; the botanical origin; description; chemical composition; production and commerce; uses. This information is mostly drawn from foreign sources, there being very few printed items, notwithstanding the fact that this oil was largely used for culinary and pharmacal purposes during the confederacy, and as a lubricant for machinery.

The arrangement is after the botanical order commencing with flowering plants, and ending with the cryptogamous plants. The student of pharmacy could not do better than to master this volume, and the general practitioner ought not be satisfied without it as a reference book of the highest order of usefulness.



## TRICHINOSIS FROM AMERICAN PORK.

There has been an outbreak of trichinosis on board the English reformatory school-ship Cornwall, traceable to "American pork," exceptionally obtained from a firm in Bristol. The pork consisted solely of "belly-pieces," and therefore parts of many pigs, and those parts most likely to be infected with trichinae."

Mr. Power, who made the investigation, found great difficulty in arriving at his conclusions about the presence of trichinae, as the symptoms were very much like those of enteric and simple continued fever. Since this was written grave doubts have arisen as to Mr. Power's conclusions,

## CURRENT LITERATURE.

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### A SAD REVELATION—DR CARUS WARBURG.

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It has been the fate of some men to be appreciated too late. Bread has been asked for during life and refused, but after death a stone is given, and a statue is raised as recompense for merit.

History furnishes us with many instances of this kind. The sad narrative of Dr. Maclean in *The Times*, September, 1878, in reference to the position of Dr. Carus Warburg, furnishes us with an instance of the cruel injustice of the world in bestowing its favors, and of the fate that may await men of the highest talent if they forget self, in their desire to benefit their fellow-men. Professor Maclean said that Dr. Carus Warburg was "wanting the common necessities of life," though he was the discoverer of a remedy which would have made for him a fortune had he kept it secret, like other astute owners of recipes. Through the agency of Dr. Maclean, Warburg revealed, to the profession, the composition of his remedy for malarial intermittent fevers and cholera, in the hope that government might obtain their supply from him. But if any promise of the kind was ever held out it was not fulfilled, for we presume, when the secret of the remedy became public property, it could be procured at a cheaper price, and government did not seem to consider itself bound to recompense the discoverer. Dr. Warburg was wanting in worldly wisdom in not having a bond—signed, sealed, and delivered—that he should be adequately rewarded for his prescription, and his position will be attributed by some to his own fault in neglecting this precaution. We are not informed whether any inducements were held out by Professor Maclean, but the facts are that Warburg parted with his secret to him gratuitously, and was absolutely destitute. He possessed a prescription of his own of a complex nature, more so even than that of chlorodyne, a remedy of high reputation in India against the malignant malarias of that country and cholera. Its composition was made known by Professor Maclean in the columns of a contemporary several years since, and he gave his unqualified support to all that had been said in its favor. Dr. Broadbent has, moreover, testified that its efficacy cannot be disputed. The following is the formula :

- Aloes (Socot.) libram ;  
 Rad. rhei (East India) ;  
 Sem. Angelicæ ;  
*a.* Confee. Damocratis. AA uncias quatuor.  
 Rad. Helenii ;  
 Croci salivi ;  
 Sem. Fœniculi ;  
*b.* Cret. Preparat. AA uncias duas.  
 Rad. Gentianæ ;  
 Rad. Zedoariæ ;  
 Prep. Cubeb ;  
 Myrrh elect. ;  
 Camphor ;  
*c.* Bolet Laricis. AA unciam.

The above ingredients are to be digested with 500 oz. of proof spirit in a water bath for twelve hours, then expressed and ten ounces of disulphate of quinine added ; the mixture to be replaced in the water bath until all the quinine be dissolved. The liquor when cool is to be filtered, and is then fit for use.

*a.* This confection is to be found in the London Pharmacopœia, 1746.

*b.* Added by Dr. Warburg to correct the acrid taste.

*c.* This is the Polyporous laricis, Polyporous officinalis, Boletus purgans, or larch-agaric.

The tincture is of a deep brown color, has an aromatic and slightly terebinthinate odor, and an intensely bitter and warm aromatic taste.

Quinine is one of the most important ingredients, and, as Professor Maclean observes, many may say this vaunted remedy is only quinine concealed in a farrago of inert substances for purposes of mystification. To this objection Professor Maclean answers :—

“I have treated remittent fevers of every degree of severity contracted in the jungles of the Deccan and Mysore, at the base of mountain ranges in India, on the Coromandel coast, in the pestilential islands of the Madras Presidency, on the malarial rivers of China, and in men brought to Netley Hospital from the swamps of the Gold Coast, and I affirm that I have never seen quinine when given alone act in the manner characteristic of Warburg’s tincture.”



We may take it for granted that it is of inestimable value in Indian practice, whilst it has also been found useful by physicians in this country. Dr. Warburg must be complimented for acting in the spirit of a true physician in revealing its mode of preparation, but it is a matter of regret that he should have lost by his honorable conduct. In the absence of more definite information as to the exact circumstances under which Dr. Warburg communicated his secret to Dr. Maclean, it is impossible for us to censure the Government of the day. If Dr. Warburg has been ungenerously treated we trust that some reparation has been made him. An annuity was granted to the widow of the late Dr. Donovan, of Skibbereen, so well known by his researches on starvation. There is at least a ray of hope that Dr. Warburg's impecuniosity was effectually relieved before it was too late.—*Med. Press and Circular.*

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#### STENOSIS OF THE LARYNX FROM SYPHILIS—TRACHEOTOMY—DILATATION WITH A METALLIC SOUND—CURE.

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Dr. Morris J. Asch reports (*Archives of Laryngology*) the case of a woman who presented herself at the Clinic of the Metropolitan Throat Hospital with complete aphonia and considerable dyspnoea. A laryngoscopic examination showed the parts to be ulcerated and deformed to such an extent as to be almost unrecognizable. The epiglottis was completely destroyed. The aryteno-epiglottic folds were thickened and the ventricular bands adherent to such a degree that the larynx was almost entirely closed, an opening scarcely as large as a small pea remaining. The parts below were quite invisible.

A suspicion of syphilis led to the employment of large doses of iodide of potassium without any amelioration of the symptoms.

Thirteen days after she came under observation it was found necessary to perform tracheotomy by reason of increased dyspnoea. The operation was performed painlessly under local anæsthesia by rhigolene spray. A silver tracheotomy tube was inserted and anti-syphilitic treatment instituted.

In about fifty days after the tracheotomy, adhesions were broken up as far as possible with a laryngeal sound, and in a very few days a very decided improvement was visible in the laryngeal opening. The larynx became extremely sensitive, a spasm of cough following the slightest contact of the sound. Applications of iodine and glycerine were made every third day, and in June (six months after tracheotomy) dilatation of the larynx with a flexible metal sound was commenced. The size of the sound was gradually increased with good results. Some ulceration showed itself at the opening with the effect of making it wider, and on the 17th of October the healthy space was so much enlarged that the tube was permanently removed.

November 16th. A laryngoscopic examination showed a very satisfactory condition as regarded respiration. The trachea was visible to the third ring. The vocal cords of both sides were seen to be destroyed with the exception of a small portion of the right or anteriorly. Great deformity existed in the larynx, but the rima glottidis was quite open and all hindrance to respiration had disappeared.

December 17th. About twelve months after treatment commenced, the voice was rough but quite strong, and in a few weeks the patient sailed for Europe cured.

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## TRANSFUSION OF BLOOD IN TERTIARY SYPHILIS.

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I have in the course of my experiments found another indication for transfusion of blood. In cases of tertiary syphilis or malignant syphilis, where iodide of potassium and tonics fail to do any good, and the patient is sinking, transfusion of blood is one of the best things that can be done. I did not get at this fact until last year I tried it as an experiment without any special faith in its efficacy. I knew it would revive the patient somewhat; that the introduction of a few ounces of healthy blood would be beneficial, but I did not expect the transformation which resulted. The patient was an inmate of Charity Hospital, and had had syphilis for a number of years, and also a cavity in the left lung. They had tried everything;

the man was going to die ; I suggested the operation, and he consented without any hesitation. The man had several very deep ulcers in his legs, which had there for a long time ; there were also ulceration between the toes ; there were large spots of pigmentation on the back and limbs ; besides these, there were many large ecchymatous pustules scattered in different places. I injected between five and six ounces of blood, undefibrinated, mixed with ammonia. On Wednesday, five days after the operation, Dr. Van Buren showed the case to his class. The ulcers within that short period had healed over. They commenced to heal immediately after the operation, some of them were completely covered ; the pigmentation spots left the skin before the end of the week. The change was very remarkable, his strength returned, his appetite returned, and he continued improving for two weeks. Then he had a hemorrhage from the lungs, and I transfused him again. I transfused him altogether three times. He remained in the hospital four months after the last operation, with scarcely a sign of syphilis about him, though his phthisis kept him back. The deposit was gradually breaking down in his lung, but the signs of syphilis for the time being disappeared.

Of course there is strong likelihood of their coming back. I don't know what became of him. He left the hospital soon afterward very much improved. The syphilis will probably show again, but there is nothing in our *Materia Medica*, no method of treating a case of syphilis that would have produced the same results as the transfusion did in this dying case of tertiary syphilis and phthisis. After that I transfused four other syphilitic patients, and all but one, who was dying when I operated, showed remarkable improvement, but not so much as in the first case. They were all in the last stages of phthisis and syphilis.

Their ulcers healed, and that satisfies me that syphilis is one of the diseases which, when medicines fail to affect, should be treated with intra-venous injections of blood. I have no more doubt of that fact than I have of its beneficial influence in hemorrhage.—JOSEPH W. HOWE, in *Annals of the Anatomical and Surgical Society*, May, 1880.

# AMERICAN MEDICAL ASSOCIATION.

## THIRTY-FIRST ANNUAL MEETING.

Held in the City of New York, N. Y., June 1, 2, 3 and 4, 1880.

TUESDAY, JUNE 1—FIRST DAY.

The Association met in Association Hall, and was called to order at 11 A. M., by the President, Lewis A. Sayre, M. D., of New York, N. Y.

Prayer was offered by Rev. W. F. Morgan, D. D.

Address of welcome was delivered by Dr. T. Gaillard Thomas.

Dr. Thomas spoke of the great progress which had been made, through the instrumentality of the printing press, the railroad, and the telegraph, which and which alone were what had rendered our civilization superior to that of any which had preceded the nineteenth century. Another grand result which these agencies had accomplished, was the general elevation of the professional tone throughout the world, and the medical profession represented by the American Medical Association might truthfully declare to the young men about to enter it, that the shibboleth of success was merit.

The Secretary, Dr. W. B. Atkinson, of Philadelphia, then read the list of names registered, 372 in number, and on motion by Dr. J. M. Toner, of Washington, they were confirmed.

### THE PRESIDENT'S ADDRESS

was then delivered, and with unusual fervor. It was plain, practical and forcible, and will be published in full hereafter.

### SECTION ON DISEASES OF CHILDREN.

Dr. Pallen, of the Committee of Arrangements announced that provision had been made for a temporary section on Diseases of Children.

### RESOLUTION OF CONDOLENCE.

Dr. S. D. Gross of Philadelphia, moved, with appropriate remarks, that the Association tender to their President, and, through him, to the family, their warmest sympathy in their sad bereavement by the death of Dr. Charles H. H. Sayre. The motion was adopted by a rising vote.

### REPORT OF COMMITTEE ON PRIZE ESSAYS.

The Committee on Prize Essays, through its Chairman, Dr.

Austin Flint, reported that they did not feel warranted in awarding a prize to the single essay presented. Accepted and adopted.

The reports of other committees were announced, and received the usual reference.

On motion, the Chairman of the Committee of Arrangements was instructed to have announced in the Sections that to-morrow morning, at 9 : 30, the several delegations will meet in the general hall for the purpose of selecting a representative to serve on the Committee on Nominations.

The Association then adjourned to meet on Wednesday morning at 10 o'clock.

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## SECTION ON PRACTICE OF MEDICINE.

J. S. Lynch, M. D., Chairman.

W. C. Glasgow, M. D., Secretary.

The first paper,

### ON THE CLASSIFICATION OF REMEDIES,

was read by Dr. Wm. H. Thomson, of New York.

Dr. Thomson referred to the many classifications of remedies already in vogue, and the objections which can be found against each.

The weakness of the classification on symptomatological grounds, for instance, is illustrated by the properties given to "hoarhound" in our dispensatory. Here it is stated to be laxative, diuretic, diaphoretic, expectorant, and a general deobstruent.

A better principle to go on is that of taking as the character of the drug, on the one hand, the effect it produces in a certain time in one large dose, and, on the other hand, the effect that is produced by a gradual administration of it. Illustrations of the one class are emetics and opium; of the other, are mercury, iron and arsenic. The difference between these two classes is marked. Thus, the *immediate remedies* produce symptoms at once; the *remote* do not act so, or, if they do, it may be considered that they are not acting remedially. Another difference is that the immediate remedies produce their symptoms in the healthy as much as in the sick; the remote remedies do not act so. Iron does not enrich the blood of the healthy.

Again, the first class is given to remove symptoms, the second class, to cure disease. Opium, on the one hand, and iodide of potassium on the other, illustrate this.

We may lay it down as a rule that when the first class, or symptom-remedies, do not produce symptoms, we have not given enough. On the other hand, when the second class produces symptoms, we have given too much. The first class, or symptom-medicines, again affect functions; the second class, or disease medicines, affect



organs. This difference is shown in the effects of iron and digitalis. The latter is a neurotic, and affects the function of the heart. Iron, however, affects the tissue of the organ, and may prevent its fatty degeneration.

In the treatment of acute affections, fevers, etc., the disease-medicines are almost always useless; and in the treatment of chronic diseases, the symptom-medicines are generally useless. This is because acute diseases, as a rule, are due to accidental functional derangement, while chronic diseases are due to organic changes. Here it is that the physician cures, if anywhere; and here he will gain his greatest triumphs.

The classification proposed, therefore, is as follows:

#### ORDER I.—DISEASE-MEDICINES.

*Class I.*—Restoratives, which are natural to the system.

*Class II.*—Alteratives, which are unnatural or foreign to the body. These medicines cease to act remedially when they begin to produce symptoms. It is well to give the restoratives with the alteratives, as it will put off or prevent the development of symptoms.

#### ORDER II.—SYMPTOM-MEDICINES.

*Class I.*—Neurotics, which affect nerve-functions.

(a) Those which are both stimulants and sedative, as opium.

(b) Stimulants, as ammonia.

(c) Sedatives, as aconite.

*Class II.*—Glandular medicines.

*Class III.*—Astringents.

The advantages of this classification are that it helps the student in studying the action of remedies, and the practitioner in administering them intelligently.

The paper of Dr. Thomson being open for discussion.

Dr. Bartholow was of opinion that no correct classification of remedies could be made at present, as our knowledge is insufficient.

Dr. Thomson said in reply that he thought Dr. Bartholow misunderstood his position. Thus, in regard to the classification by dosage, his point was that one dose of symptom-medicines, whether great or small, must act at once. The symptoms may vary, but the time is immediate.

In regard to symptom-medicines not curing disease, he had never seen digitalis do what Dr. Bartholow asserted it could, *i. e.*, cure dilatation of the heart.

In regard to the use of the word alterative, Dr. T. had used it with reluctance, and did not use it all with his students; but it was a convenient and familiar term.

Dr. Putnam-Jacobi called attention to the fact that the ultimate action of all medicines was necessarily molecular. That Nothnagel endorsed the conclusions based on our experiments, that alkaloids

acted by diminishing the oxidations in nerve-tissue—that is, affected the first step in the process of elementary respiration, whereby the atom of carbon was liberated from its albuminous molecule and given up to the oxygen of the blood. Thus, we may suppose that the opium, for instance, diminishes the activity of the intra-molecular oscillation of atoms. While mercury, on the contrary, accelerates this intra-molecular oscillation, and favors the breaking up of the albuminous molecule saturated with a specific poison.

Again, although small doses of morphine produced only perceptible effects on the molecules of the nerve tissues, poisonous doses were seen to extend these very same effects to *all* tissues. Thus, in opium coma, the elementary respiration is *everywhere arrested*, oxidation of all tissues deficient, hence the secondary paralysis of capillaries, which is a prominent feature of opium poisoning.

In such a conception of molecular action we are able to have a comprehensive view of the entire action of the drug; also a proof that an influence called “functional,” when confined to nerve-centres, becomes structural when with increased doses it extends beyond them.

Dr. Roberts Bartholow objected farther to Dr. Thomson’s paper. He instanced several examples of symptom remedies which did cure disease.

Dr. Thomson said that the anæmia produced, as stated by Dr. Bartholow, was not due to the direct effect of the drug, but to the anorexia which the drug produced. So of other remedies of this class—they might produce structural changes, but not as a direct result of their use.

With reference to Dr. Jacobi’s remarks that, even in functional remedies of this class—they might produce structural changes, he admitted this, but said that we are so very far away from ever knowing what these changes are, that they need not be taken into account. He did not believe in the value of German theories in regard to the precipitation of albumen by various drugs.

At the close of the discussion the paper was referred to the Committee on Publication, and ordered to be printed.

[To be continued.]

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## BOOKS AND PAMPHLETS RECEIVED.

A Practical Treatise of Sea-Sickness : Its Symptoms, Nature and Treatment. By George M. Beard, A. M., M. D., &c., &c. E. B. Treat, No. 757, Broadway, New York.

Animal Vaccination : A Preliminary Report on an Investigation of the Results of Vaccination from the Calf. By Ernest Hart, Esq. British Med. Association, 161 A, Strand, London : Pp. 89.

Jahres-Bericht des Vortlandes des Deutschen Hospitals und Dispensary in der Stadt New York für das Jahr. 1879.

Annual Report of the Board of Directors of the German Hospital and Dispensary in the city of New York for the year 1879.

Our readers will remember with pleasure the Wood's Library for 1879, which put within their reach so many valuable books at a small price. For 1880 still greater things are offered. We have before us four handsome volumes which we will notice more fully at some future day :

A Treatise on Foreign Bodies in Surgical Practice. By Alfred Poulet, M. D. Vol. 1. Pp. 266, and Vol. 2. Pp. 320. 8vo cloth. Wm. Wood & Co.

The Venereal Diseases, Including Stricture of the Male Urethra. By E. L. Keyes, A. M., M. D. Pp. 348. 8vo. cloth. Wm. Wood & Co.

A Hand-Book of Physical Diagnosis, comprising the Throat, Thorax and Abdomen. By Dr. Paul Guttman. From the 3d German Edition. By Alex. Napier, M. D. Glasgow: With colored plates, and 89 fine wood-engravings. 8vo. cloth. Pp. 353. Wm. Wood & Co.

Report of the Proceedings in the Case of Ruths vs. Rueling, tried in the Circuit Court of Howard County, Md. March Term. 1880. Pamphlet. Pp. 79. Compliments of Dr Geo. Rueling, 79 W. Monument Street.

Report of the Howard Association of Memphis, Tennessee, for the year ending April 5th, 1880.

The Bromide of Ethyl as an Anæsthetic. By J. Marion Sims, M. D., LL. D. Read before the New York Academy of Medicine, March 18th, 1880. With discussions on the same by Drs. Lewis, Squibb, Dalton, Post, Piffard, Little, Wylie and Roberts. Pp. 22.

Lessons in Gynæcology. By Wm. Godell, M. D. D. G. Brinton. Philadelphia.

The Practitioner's Reference Book. By Richard J. Dunglison, A. M., M. D. Second Edition. Revised and enlarged. Philadelphia: Lindsay & Blakiston. Pp. 476.

The Treatment of Puerperal Septicæmia by Intra-Uterine Injections. By Edward W. Jenks, M. D., LL. D. Chicago, Ill. Reprint. Pp. 24.

By the same Author on Coccygodinia. A lecture delivered in Chicago Medical College. March, 1880. Reprint. Pp. 15.

An Address (Euthanasia and the Evolution Hypothesis). Delivered before the South Carolina Medical Association at its annual meeting in Columbia, S. C., April 21, 1880. By F. M. Robertson, M. D. Retiring President. Pp. 15.

The Truth about Vaccination. An Examination and Refutation of the Assertions of the Anti-Vaccinators. By Ernest Hart, Chairman of the Parliamentary Bills Committee of the British Medical Association. London: Smith, Elder & Co., 15 Waterloo Place.





















